

VIRGINIA ACTS OF ASSEMBLY -- 1999 SESSION

CHAPTER 256

An Act to amend and reenact §§ 45.1-161.8, 45.1-161.17, 45.1-161.32, 45.1-161.58, 45.1-161.59, 45.1-161.63, 45.1-161.64, 45.1-161.65, 45.1-161.66, 45.1-161.70, 45.1-161.77, 45.1-161.78, 45.1-161.80, 45.1-161.83, 45.1-161.87, 45.1-161.88, 45.1-161.108, 45.1-161.109, 45.1-161.114 through 45.1-161.118, 45.1-161.121, 45.1-161.123, 45.1-161.124, 45.1-161.129, 45.1-161.133, 45.1-161.134, 45.1-161.135, 45.1-161.140, 45.1-161.141, 45.1-161.143, 45.1-161.144, 45.1-161.147, 45.1-161.150, 45.1-161.151, 45.1-161.152, 45.1-161.158, 45.1-161.159, 45.1-161.162, 45.1-161.165, 45.1-161.170, 45.1-161.173, 45.1-161.181, 45.1-161.186, 45.1-161.187, 45.1-161.188, 45.1-161.189, 45.1-161.191, 45.1-161.193 through 45.1-161.197, 45.1-161.203, 45.1-161.207, 45.1-161.209, 45.1-161.210, 45.1-161.211, 45.1-161.213, 45.1-161.220, 45.1-161.221, 45.1-161.222, 45.1-161.227, 45.1-161.228, 45.1-161.231, 45.1-161.235, 45.1-161.249, 45.1-161.251, 45.1-161.256, 45.1-161.257, 45.1-161.258, 45.1-161.263, 45.1-161.266, 45.1-161.269, 45.1-161.270, 45.1-161.280, 45.1-161.282, 45.1-161.285, 45.1-161.290, 45.1-222 and 45.1-224 of the Code of Virginia and to repeal §§ 45.1-161.185, 45.1-161.192 and 45.1-161.230 of the Code of Virginia, relating to the Coal Mine Safety Act; penalty.

[H 2210]

Approved March 18, 1999

Be it enacted by the General Assembly of Virginia:

1. That §§ 45.1-161.8, 45.1-161.17, 45.1-161.32, 45.1-161.58, 45.1-161.59, 45.1-161.63, 45.1-161.64, 45.1-161.65, 45.1-161.66, 45.1-161.70, 45.1-161.77, 45.1-161.78, 45.1-161.80, 45.1-161.83, 45.1-161.87, 45.1-161.88, 45.1-161.108, 45.1-161.109, 45.1-161.114 through 45.1-161.118, 45.1-161.121, 45.1-161.123, 45.1-161.124, 45.1-161.129, 45.1-161.133, 45.1-161.134, 45.1-161.135, 45.1-161.140, 45.1-161.141, 45.1-161.143, 45.1-161.144, 45.1-161.147, 45.1-161.150, 45.1-161.151, 45.1-161.152, 45.1-161.158, 45.1-161.159, 45.1-161.162, 45.1-161.165, 45.1-161.170, 45.1-161.173, 45.1-161.181, 45.1-161.186, 45.1-161.187, 45.1-161.188, 45.1-161.189, 45.1-161.191, 45.1-161.193 through 45.1-161.197, 45.1-161.203, 45.1-161.207, 45.1-161.209, 45.1-161.210, 45.1-161.211, 45.1-161.213, 45.1-161.220, 45.1-161.221, 45.1-161.222, 45.1-161.227, 45.1-161.228, 45.1-161.231, 45.1-161.235, 45.1-161.249, 45.1-161.251, 45.1-161.256, 45.1-161.257, 45.1-161.258, 45.1-161.263, 45.1-161.266, 45.1-161.269, 45.1-161.270, 45.1-161.280, 45.1-161.282, 45.1-161.285, 45.1-161.290, 45.1-222 and 45.1-224 of the Code of Virginia are amended and reenacted as follows:

§ 45.1-161.8. Definitions.

As used in this chapter and in Chapters 14.3 (§ 45.1-161.105 et seq.) and 14.4 (§ 45.1-161.253 et seq.) of this title, unless the context requires a different meaning:

"Abandoned area" means the inaccessible area of an underground mine that is sealed or ventilated and in which further mining is not intended.

"Accident" means (i) a death of an individual at a mine; (ii) a serious personal injury; (iii) an entrapment of an individual for more than thirty minutes; (iv) an unplanned inundation of a mine by liquid or gas; (v) an unplanned ignition or explosion of gas or dust; (vi) an unplanned fire not extinguished within thirty minutes of discovery; (vii) an unplanned ignition or explosion of a blasting agent or an explosive; (viii) an unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use; or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage; (ix) a coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than one hour; (x) an unstable condition at an impoundment, refuse pile, or culm bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area; or, failure of an impoundment, refuse pile or culm bank; (xi) damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than thirty minutes; and (xii) an event at a mine which causes death or bodily injury to an individual not at a mine at the time the event occurs; and (xiii) the unintentional fall of highwall that entraps equipment for more than thirty minutes.

"Active areas" means all places in a mine that are ventilated, if underground, and examined regularly.

"Active workings" means any place in a mine where miners are normally required to work or travel.

"Agent" means any person charged by the operator with responsibility for the operation of all or a part of a mine or the supervision of the miners in a mine.

"Approved" means a device, apparatus, equipment, condition, method, course or practice approved in writing by the Chief or Director.

~~"Armored cable" means a cable provided with a wrapping of metal, plastic or other approved material.~~

"Authorized person" means a person assigned by the operator or agent to perform a specific type of

duty or duties or to be at a specific location or locations in the mine who is ~~task trained in accordance with requirements of the federal mine safety law~~ and has demonstrated the ability to perform such duty or duties safely and effectively.

"Blower fan" means a fan with tubing used to direct part of a particular circuit of air to a working place.

"Booster fan" means an underground fan installed in conjunction with a main fan to increase the volume of air in one or more circuits.

"Cable" means a stranded conductor (single-conductor cable) or a combination of conductors insulated from one another (multiple-conductor cable).

"Certified person" means a person holding a valid certificate from the Board of Coal Mining Examiners authorizing him to perform the task to which he is assigned.

"Circuit" means a conducting part or a system of conducting parts through which an electric current is intended to flow.

"Circuit breaker" means a device for interrupting a circuit between separable contacts under normal or abnormal conditions.

"Coal mine" means a surface coal mine or an underground coal mine.

"Coal Mine Safety Act" or "Act" shall mean this chapter and Chapters 14.3 (§ 45.1-161.105 et seq.) and 14.4 (§ 45.1-161.253 et seq.) of this title, and shall include any regulations promulgated thereunder, where applicable.

~~"Competent person" means a person designated by the Department as having abilities and experience that fully qualify him to perform the duty to which he is assigned.~~

"Cross entry" means any entry or set of entries, turned from main entries, from which room entries are turned.

"Experienced surface miner" means a person with more than six months of experience working at a surface mine or the surface area of an underground mine.

"Experienced underground miner" means a person with more than six months of underground mining experience.

"Federal mine safety law" means the Federal Mine Safety and Health Act of 1977 (P.L. 95-164), and regulations promulgated thereunder.

"Fuse" means an overcurrent protective device with a circuit-opening fusible member directly heated and destroyed by the passage of overcurrent through it.

"Ground" means a conducting connection between an electric circuit or equipment and earth or to some conducting body which serves in place of earth.

"Grounded" means connected to earth or to some connecting body which serves in place of the earth.

"Hazardous condition" means conditions that are likely to cause death or serious personal injury to persons exposed to such conditions.

"Imminent danger" means the existence of any condition or practice in a mine which could reasonably be expected to cause death or serious personal injury before such condition or practice can be abated.

"Inactive mine" means a mine (i) at which coal or minerals have not been excavated or processed, or work, other than examinations by a certified person or emergency work to preserve the mine, has not been performed at an underground mine for a period of thirty days, or at a surface mine for a period of sixty days, (ii) for which a valid license is in effect, and (iii) at which reclamation activities have not been completed.

"Inexperienced underground miner" means a person with less than six months of underground mining experience.

"Intake air" means air that has not passed through the last active working place of the split ~~or by the unsealed entrances to abandoned areas of any working section or any worked-out area whether pillared or nonpillared~~, and by analysis contains not less than nineteen and one-half percent oxygen nor more than one-half of one percent of carbon dioxide, nor any hazardous quantities of flammable gas nor any harmful amounts of poisonous gas.

"Interested persons" means members of the Mine Safety Committee and other duly authorized representatives of the employees at a mine; federal Mine Safety and Health Administration employees; mine inspectors; and, to the extent required by this Act, any other person.

"Main entry" means the principal entry or set of entries driven through the coal bed or mineral deposit from which cross entries, room entries, or rooms are turned.

"Mine" means any underground coal mine or surface coal mine. Mines that are adjacent to each other and under the same management and which are administered as distinct units shall be considered as separate mines. A site shall not be a mine unless the coal extracted or excavated therefrom is offered for sale or exchange, or used for any other commercial purposes.

"Mine fire" means an unplanned fire not extinguished within thirty minutes of discovery.

"Mine foreman" means a person holding a valid certificate of qualification as a foreman duly issued by action of the Board of Coal Mining Examiners.

"Mine inspector" means a public employee assigned by the Chief or the Director to make mine

inspections as required by this Act, and other applicable laws.

"Miner" means any individual working in a mine.

"Mineral" means clay, stone, sand, gravel, metalliferous and nonmetalliferous ores, and any other solid material or substance of commercial value excavated in solid form from natural deposits on or in the earth, exclusive of coal and those minerals which occur naturally in liquid or gaseous form.

"Monthly" means, unless otherwise stated, to have occurred any time during the period of the first through the last day of a calendar month.

"Operator" means any person who operates, controls or supervises a mine or any independent contractor performing services or construction at such mine.

"Panel entry" means a room entry.

"Permissible" means a device, process, or equipment or method heretofore or hereafter classified by such term by the Mine Safety and Health Administration, when such classification is adopted by the Chief or the Director, and includes, unless otherwise herein expressly stated, all requirements, restrictions, exceptions, limitations, and conditions attached to such classification by the Administration.

"Return air" means air that has passed through the last active working place on each split, or air that has passed through abandoned or worked-out areas, *whether pillared or nonpillared*. ~~Area within a panel shall not be deemed abandoned until inaccessible or sealed.~~

"Room entry" means any entry or set of entries from which rooms are turned.

"Serious personal injury" means any injury which has a reasonable potential to cause death or an injury other than a sprain or strain which requires an admission to a hospital for twenty-four hours or more for medical treatment.

"Substation" means an electrical installation containing generating or power-conversion equipment and associated electric equipment and parts, such as switchboards, switches, wiring, fuses, circuit breakers, compensators and transformers.

"Surface coal mine" means (i) the pit and other active and inactive areas of surface extraction of coal; (ii) on-site preparation plants, shops, tipples and related facilities appurtenant to the extraction and processing of coal; (iii) surface areas for the transportation and storage of coal extracted at the site; (iv) impoundments, retention dams, tailing ponds, and refuse disposal areas appurtenant to the extraction of coal from the site; (v) equipment, machinery, tools, and other property used in, or to be used in, the extraction of coal from the site; (vi) private ways and roads appurtenant to such area; and (vii) the areas used to prepare a site for surface coal extraction activities. A site shall commence being a surface coal mine upon the beginning of any site preparation activity other than exploratory drilling or other exploration activity that does not disturb the surface, and shall cease to be a surface coal mine upon completion of initial reclamation activities.

"Travel way" means a passage, walk or way regularly used and designated for persons to go from one place to another.

"Underground coal mine" means (i) the working face and other active and inactive areas of underground excavation of coal; (ii) underground travel ways, shafts, slopes, drifts, inclines, and tunnels connected to such areas; (iii) on-site preparation plants, shops, tipples and related facilities appurtenant to the excavation and processing of coal; (iv) on-site surface areas for the transportation and storage of coal excavated at the site; (v) impoundments, retention dams, and tailing ponds appurtenant to the excavation of coal from the site; (vi) equipment, machinery, tools, and other property, on the surface and underground, used in, or to be used in, the excavation of coal from the site; (vii) private ways and roads appurtenant to such area; (viii) the areas used to prepare a site for underground coal excavation activities; and (ix) areas used for the drilling of vertical ventilation holes. A site shall commence being an underground coal mine upon the beginning of any site preparation activity other than exploratory drilling or other exploration activity, and shall cease to be an underground coal mine upon completion of initial reclamation activities.

"Weekly" means, unless otherwise stated, to have occurred any time during the period of Sunday through Saturday of a calendar week.

"Work area," as used in Chapter 14.4 (§ 45.1-161.253 et seq.) of this title, means those areas of a surface coal mine in production or being prepared for production and those areas of the mine which may pose a danger to miners at such areas.

"Worked-out area" means an area where underground coal mining has been completed, whether pillared or nonpillared, excluding developing entries, return air courses and intake air courses.

"Working face" means any place in a mine in which work of extracting coal from its natural deposit in the earth is performed during the mining cycle.

"Working place" means the area of an underground mine in by the last open crosscut.

"Working section" means all areas from the loading point of a section to and including the working faces.

§ 45.1-161.17. Affiliations of Department personnel with labor union, coal company, etc.; interest in coal mine; inspections of mines where inspector previously employed.

A. In addition to compliance with the provisions of the State and Local Government Conflict of Interests Act (§ 2.1-639.1 et seq.), neither the Chief nor any other officer or employee of the Department

shall, upon taking office or being employed, or at any other time during the term of his office or employment, have any affiliation with any operating coal company, operators' association, or labor union. Neither the Chief nor any other officer while in office shall be directly or indirectly interested as owner, partner, proprietor, lessor, operator, superintendent, or engineer of any coal mine, nor shall the Chief, or any other officer while in office, own any stock in a corporation owning a coal mine either directly or through a subsidiary.

B. Neither the Chief, ~~the Director of the Division of Mineral Mining,~~ nor any mine inspector shall perform an inspection at any mine site at which that individual was last employed for a period of two years following termination of his employment.

§ 45.1-161.32. Replacement of lost or destroyed certificates.

If any certificate issued by the Board of Coal Mining Examiners ~~shall be~~ is lost or destroyed, the Chief may supply a copy thereof to the person to whom it was issued, upon the payment of one dollar, provided, ~~it shall be that it has been~~ established to ~~the~~ his satisfaction of the Board of Coal Mining Examiners that the loss or destruction actually occurred and that the person seeking such copy was the holder of such certificate.

§ 45.1-161.58. Fee to accompany application for license; fund; disposition of fees.

Each application for a license or a renewal or transfer of a license shall be submitted to the Department, accompanied by a fee, payable to the State Treasurer, in the amount of seventy-five dollars. ~~However, any person engaged in mining sand or gravel on an area of five acres or less shall be required to pay a fee of twenty dollars.~~ All such fees collected shall be retained by the Department and paid into the state treasury and shall constitute a fund under the control of the Director. Expenditures from this fund may be made by the Department for safety equipment, safety training, safety education or for any expenditure to further the safety program in the mining industry. All expenditures from this fund must be approved by the Director.

§ 45.1-161.59. Application for license.

A. An application for a license shall be submitted by the person who will be the operator of the mine. No application for a license or a renewal thereof shall be complete unless it contains the following:

1. Identity regarding the operator of the mine. If the operator is a sole proprietorship, the operator shall state: (i) his full name and address; (ii) the name and address of the mine and its federal mine identification number; (iii) the name and address of the person with overall responsibility for operating decisions at the mine; (iv) the name and address of the person with overall responsibility for health and safety at the mine; (v) the federal mine identification numbers of all other mines in which the sole proprietor has a twenty percent or greater ownership interest; and (vi) the trade name, if any, and the full name, address of record and telephone number of the proprietorship. If the operator is a partnership, the operator shall state: (i) the name and address of the mine and its federal mine identification number; (ii) the name and address of the person with overall responsibility for operating decisions at the mine; (iii) the name and address of the person with overall responsibility for health and safety at the mine; (iv) the federal mine identification numbers of all other mines in which the partnership has a twenty percent or greater ownership interest; (v) the full name and address of all partners; (vi) the trade name, if any, and the full name and address of record and telephone number of the partnership; and (vii) the federal mine identification numbers of all other mines in which any partner has a twenty percent or greater ownership interest. If the operator is a corporation, the operator shall state: (i) the name and address of the mine and its federal mine identification number; (ii) the name and address of the person with overall responsibility for operating decisions at the mine; (iii) the name and address of the person with overall responsibility for health and safety at the mine; (iv) the federal mine identification numbers of all other mines in which the corporation has a twenty percent or greater ownership interest; (v) the full name, address of record and telephone number of the corporation and the state of incorporation; (vi) the full name and address of each officer and director of the corporation; (vii) if the corporation is a subsidiary corporation, the operator shall state the full name, address, and state of incorporation of the parent corporation; and (viii) the federal mine identification numbers of all other mines in which any corporate officer has a twenty percent or greater ownership interest. If the operator is any organization other than a sole proprietorship, partnership, or corporation, the operator shall state: (i) the nature and type, or legal identity of the organization; (ii) the name and address of the mine and its federal mine identification number; (iii) the name and address of the person with overall responsibility for operating decisions at the mine; (iv) the name and address of the person with overall responsibility for health and safety at the mine; (v) the federal mine identification numbers of all other mines in which the organization has a twenty percent or greater ownership interest; (vi) the full name, address of record and telephone number of the organization; (vii) the name and address of each individual who has an ownership interest in the organization; (viii) the name and address of the principal organization officials or members; and (ix) the federal mine identification numbers of all other mines in which any official or member has a twenty percent or greater ownership interest;

2. The names and addresses of any agent of the operator with responsibility for the business operation of the mine, and any person with an ownership or leasehold interest in the coal to be mined;

3. The names and addresses of persons to be contacted in the event of an accident or other emergency at the mine;

4. Such information required by the Department that is relevant to an assessment of the safety and health risks likely to be associated with the operation of the mine; and

5., 6. [Repealed.]

7. For any license renewal, the annual report required pursuant to § 45.1-161.62. *When no change has occurred to the information required by subdivision 1, 2, or 3 of this subsection, the operator of the mine shall only be required to certify that such information on the current license application is accurate and complete.*

B. The application shall be certified as being complete and accurate by the applicant, if an individual, by the agent of a corporate applicant, or by a general partner of an applicant that is a partnership. The application shall be submitted on forms furnished or approved by the Department.

C. Within thirty days after the occurrence of any change in the information required by subsection A, the operator shall notify the Department, in writing, of such change.

§ 45.1-161.63. Notices to Department; resumption of mining following discontinuance.

A. The operator or his agent shall send notice of intent to ~~abandon~~ or discontinue the working of an underground mine for a period of thirty days or a surface mine for a period of sixty days to the Department at least ten days prior to discontinuing the working of a mine with such intent, or at any time a mine becomes an inactive mine. *Unless examinations of the mine are being conducted during the period of discontinued use, all surface openings to the discontinued underground mine shall be secured against unauthorized entrance when the activities are discontinued for thirty days or longer. Danger signs shall be posted at each secured entrance.*

B. The operator, or his agent, shall send to the Department ten days' prior notice of intent to resume the working of an inactive mine. The working of such mine shall not resume until a mine inspector has inspected the mine and approved it.

C. Emergency actions necessary to preserve a mine may be undertaken without the prior notice of intent and advance inspection required by subsection B. In such event, a mine foreman shall examine a mine for hazardous conditions immediately before miners are permitted to work. The operator, or his agent, shall notify the Department as soon as possible after commencing emergency action necessary to preserve the mine.

D. The operator, or his agent, shall send to the Department ten days' prior notice of any change in the name of a mine or in the name of the ~~operation~~ operator of a mine.

E. The operator, or his agent, shall send to the Department ten days' prior notice of the opening of a new mine.

F. Any notice required by this section shall be in writing and shall include the name of the mine, the location of the mine, the name of the operator, and the operator's mailing address.

§ 45.1-161.64. Maps of mines required to be made; contents; extension and preservation; use by Department; release; posting of map.

A. Prior to commencing mining activity, the operator of a coal mine, or his agent, shall make, or cause to be made, unless already made and filed, an accurate map of such mine, on a scale to be stated thereon of 100 to 400 feet to the inch. At intervals not to exceed twelve months *and when a coal mine is abandoned*, the operator shall submit to the Chief three copies of an up-to-date map of the entire mine. A registered engineer or registered surveyor shall certify that the map of the mine workings is accurate. Such map shall show the mine name, company name, mine index number, legend identifying the scale of the map, symbols used and the name of the person responsible for the information on the map. The map shall contain information related to active and worked-out areas of the mine, projections for at least twelve months of anticipated development, location of gas wells and all known drill holes, the location of all known mine workings underlying, overlying, and adjacent to the mine property, the direction and quantity of air current, ventilation controls, escapeways, so much of the property lines and the outcrop of the coal of the tract of land on which the mine located as may be within 1000 feet of any part of the workings of such mine, and such other information related to underground and surface activities as deemed necessary by the Chief. If there are no changes in the information required by this section, an updated map shall not be required to be submitted to the Department.

B. The operator of any surface coal mine, or his agent, shall not be required to submit a map of such mine to the Department unless the mine may intersect (i) underground workings or (ii) workings from auger, thin seam, or highwall mining operations. The map shall be filed and preserved among the records of the Department and made available at a reasonable cost to all persons owning, leasing, or residing on or having an equitable interest in surface areas or coal or mineral interests within 1,000 feet of such mining operation upon written proof satisfactory to the Director and upon sworn affidavit that such person requesting a map has a proper legal or equitable interest; however, the Director shall provide to the person requesting a map only that portion of the map which abuts or is contiguous to the property in which such requesting party has a legal or equitable interest. In no case shall any copy of the same be made for any other person without the consent of the operator or his agent. The Director shall promptly deliver notice of such request to the operator of such mining operation.

C. The original map, or a true copy thereof, shall be kept by such operator at the active mine, open at all reasonable times for the examination and use of the mine inspector. For coal mines, such map shall be kept up to date by temporary notations and such map shall be revised and supplemented at intervals not to exceed six months. *A registered engineer or registered surveyor shall certify that the revised map is accurate. Such certification shall not be required for temporary notations.*

D. Such maps may be used by the Department for the evaluation of the coal resources of the Commonwealth.

E. Copies of such maps shall be made available at a reasonable cost to the governing body of any county, city or town in which the mine is located upon written request; however, such copies shall be provided on the condition that they not be released to any person who does not have a legal or equitable interest in surface areas or mineral interests within 1,000 feet of the mining operation without the written consent of the operator or his agent. The governing body shall promptly deliver notice of any request for a copy of such a map to the operator or his agent.

F. At underground coal mines, an accurate map of the mine showing clearly all avenues of ingress and egress in case of fire shall be posted in a place accessible to all miners.

§ 45.1-161.65. When the Chief may cause maps to be made; payment of expense.

If the operator, or his agent, of any mine shall neglect or fail to furnish to the Chief ~~or Director~~ a copy of any map or extension thereof, as provided in § 45.1-161.64, the Chief ~~or Director~~ is authorized to cause a correct survey and map of said mine, or extension thereof, to be made at the expense of the operator of such mine, the cost of which shall be recovered from the operator as other debts are recoverable by a civil action at law. If at any time the Chief ~~or Director~~ has reason to believe that such map, or extensions thereof, furnished pursuant to § 45.1-161.64 is substantially incorrect, or will not serve the purpose for which it is intended, he may have a survey and map or extension thereof made, or corrected. The expense of making such survey and map or extension thereof shall be paid by the operator. The expense shall be recovered from the operator as other debts are recoverable by a civil action at law. However, if the map filed by the operator is found to be substantially correct, the expense shall be paid by the Commonwealth.

§ 45.1-161.66. Making false statements; penalty.

A. It shall be unlawful for any person charged with the making of maps or other data to be furnished as provided in this Act to fail to correctly show, within the limits of error, the data required.

~~B. It shall be unlawful for any person charged with the making of maps or other data to be furnished as provided in this Act to~~ Any person who knowingly ~~make~~ makes any false statement ~~or return in connection therewith,~~ representation or certification in any application, record, report, plan or other document filed or required to be maintained under this Act shall, upon conviction, be guilty of a Class 1 misdemeanor.

~~C. A violation of this section is a misdemeanor, and a person convicted of violating this section shall be fined not less than \$50 nor more than \$200.~~

§ 45.1-161.70. Qualification for crew membership; direction of crews.

A. To qualify for membership in mine ~~reserve~~ rescue crews an applicant shall (i) be an experienced miner, (ii) ~~be not more than fifty years of age,~~ and (iii) ~~shall~~ pass a physical examination by a licensed physician at least annually. A record that such examination was taken shall be kept on file by the operator who employs the crew members and a copy shall be furnished to the Director.

B. All rescue or recovery work performed by these crews shall be under the jurisdiction of the Department. The Department shall consult with company officials, representatives of the Mine Safety and Health Administration and representatives of the miners, and all should be in agreement as far as possible on the proper procedure for rescue and recovery; however, the Chief in his discretion may take full responsibility in directing such work. ~~In all instances,~~ Procedures for use of apparatus or equipment shall be guided by the mine rescue apparatus and auxiliary equipment manuals.

§ 45.1-161.77. Reports of explosions and mine fires; procedure.

A. If an explosion or mine fire occurs in a mine, the operator shall notify the Department by the quickest available means. All facilities of the mine shall be made available for rescue and recovery operations and firefighting.

B. No work other than rescue and recovery work and firefighting may be attempted or started until and unless it is authorized by the Department.

C. If an explosion occurs in an underground mine, the fan shall not be reversed except by authority of the officials in charge of rescue and recovery work, and then only after a study of the effect of reversing the fan on any persons who may have survived the explosion and are still underground.

D. The Department shall make available all the facilities at its disposal in effecting rescue and recovery work. The Chief ~~or Director~~ shall act as consultant, or take personal charge, where in his opinion the circumstances of any mine explosion, fire or other accident warrant.

E. The orders of the official in charge of rescue and recovery work shall be respected and obeyed by all persons engaged in rescue and recovery work.

F. The Chief shall maintain an up-to-date rescue and recovery plan for prompt and adequate employment at any coal mine in the Commonwealth. All employees of the Department shall be kept

fully informed and trained in their respective duties in executing rescue and recovery plans. The Department's plans shall be published annually and furnished to all operators of mines. Changes in the plan shall be published promptly when made and furnished to all operators of mines.

§ 45.1-161.78. Operators' reports of accidents; investigations; reports by Department.

A. Each operator will report promptly to the Department the occurrence at any mine of any accident involving serious personal injury or death to any person or persons, whether employed in the mine or not. The scene of the accident shall not be disturbed pending an investigation, except to *the extent necessary to rescue or recover a person, prevent or eliminate an imminent danger, prevent destruction of mining equipment, or prevent suspension of use of a slope, entry or facility vital to the operation of a section or a mine.* In cases where reasonable doubt exists as to whether to leave the scene unchanged, the operator will secure prior approval from the Department before any changes are made.

B. The Chief will go personally or dispatch one or more mine inspectors to the scene of such a coal mine accident, investigate causes, and issue such orders as may be needed to ensure safety of other persons.

C. Representatives of the operator will render such assistance as may be needed and act in a consulting capacity in the investigation. An employee if so designated by the employees of the mine will be notified, and as many as three employees if so designated as representatives of the employees may be present at the investigation in a consulting capacity.

D. The Department will render a complete report of circumstances and causes of each accident investigated, and make recommendations for the prevention of similar accidents. The Department will furnish one copy of the report to the operator, and one copy to the employee representative when he has been present at the investigation. The Chief shall maintain a complete file of all accident reports for coal mines, and shall give such further publicity as may be ordered by the Director in an effort to prevent mine accidents.

§ 45.1-161.80. Duties of mine inspectors.

Each mine inspector shall:

1. Report immediately, and by the quickest available means, any mine fire, mine explosion, and any accident involving serious personal injury or death to his supervisor;

2. Proceed immediately to the scene of any accident at any mine under his jurisdiction that results in loss of life or serious personal injury, and to the scene of any mine fire or explosion regardless of whether there is loss of life or personal injury. He shall make such investigation and suggestions and render such assistance as he deems necessary for the future safety of the employees, and make a complete report to his supervisor as soon as practicable. He shall have the power to compel the attendance of witnesses, and to administer oaths or affirmations; and

3. ~~Take charge of~~ *Provide assistance* to mine rescue and recovery operations whenever a mine fire, mine explosion, or other serious accident occurs, and shall ~~supervise~~ *monitor* the reopening of all mines or sections thereof that have been sealed or abandoned on account of fire or any other cause *in accordance with a plan approved by the Chief.*

§ 45.1-161.83. Review of inspection reports and records.

Prior to commencing an inspection of a coal mine, a mine inspector shall review the most recent available report of inspection by the Mine Safety and Health Administration. Prior to commencing any inspection of a mine, a mine inspector shall comprehensively review the records of pre-shift examinations, on-shift exams, daily inspections, *and* weekly examinations, ~~and other records relating to safety and health conditions in the mine~~ which are required to be maintained pursuant to this Act, for the thirty-day period preceding the inspection. The mine inspector may, but shall not be required to, review the records for such additional period as he may deem prudent. *The inspector shall review other records relating to safety and health conditions in the mine which are required to be maintained pursuant to this Act during the course of the inspection.*

§ 45.1-161.87. Duties of operator.

A. The operator, or his agent, of every mine shall furnish the Chief ~~or Director, as applicable,~~ and mine inspectors proper facilities for entering such mine and making examinations or obtaining information and shall furnish any data or information not of a confidential nature requested by such inspector.

B. The operator of an underground mine, or his agent, shall provide a mine inspector adequate means for transportation to the active working areas of the mine within a reasonable time following the mine inspector's arrival at the mine.

C. The operator or his agent shall, when ordered to do so by a mine inspector during the course of his inspection, promptly clear the mine or section thereof of all persons.

§ 45.1-161.88. Duties of inspectors.

A. During a complete inspection of a mine, other than an inactive mine, the mine inspector shall inspect, where applicable, the surface plant; all active workings; all active travel ways; entrances to ~~abandoned areas~~ *inaccessible worked-out areas*; accessible worked-out areas; at least one entry of each intake and return airway in its entirety; escapeways and other places where miners work or travel or where hazardous conditions may exist; electric installations and equipment; haulage facilities; first-aid

equipment; ventilation facilities; communication installations; roof and rib conditions; roof-support practices; blasting practices; haulage practices and equipment; and any other condition, practice or equipment pertaining to the health and safety of the miners. The mine inspector shall make tests for the quantity of air flows, and for gas and oxygen deficiency, in each place which he is required to inspect in an underground mine. In mines operating more than one shift in a twenty-four-hour period, the mine inspector shall devote sufficient time on the second and third shifts to determine conditions and practices relating to the health and safety of the miners. For an inactive mine, the mine inspector shall inspect all areas of the mine where persons may work or travel during the period the mine is an inactive mine.

B. The inspector shall make a personal examination of the interior of the mine, and of the outside of the mine where any danger may exist to the miners.

§ 45.1-161.108. Roof, ribs and faces to be secure.

A. All underground active workings and travel ways shall be secured ~~sufficiently~~ *and controlled* to protect miners from falls of roof, face or ribs. Loose roof and loose or overhanging ribs and faces shall be taken down or supported.

B. The method of mining followed shall not expose miners to ~~unusual hazards~~ *hazardous conditions* caused by excessive widths of rooms and entries, faulty pillar-recovery methods, or other hazardous mining methods or working conditions.

§ 45.1-161.109. Roof control plans.

A. The Chief shall, where he deems necessary, prescribe adequate minimum standards for systematic support of mine roof, suitable to the roof conditions and mining system of each mine. Such standards shall be ~~reflected in~~ *incorporated into an approved roof control plan showing the minimum number and the location of supports, such as posts, crossbars, or bolts, that shall be installed for the mine. This section shall not apply to roof control systems installed prior to January 27, 1988, so long as the support system continues to effectively control the roof, face and ribs.*

B. Failure to comply with the *approved* roof control plan for the mine shall constitute a violation of this section.

C. The *approved* roof control plan shall be posted conspicuously ~~near the main entrance to~~ *at the mine and a copy shall be available at each working section of the mine.*

D. The minimum standards and plan shall provide for temporary support at all active workings, without regard to natural condition.

E. If the minimum standards do not afford adequate protection, such additional supports as shall be necessary shall be installed. Such additional supports shall be described in the plan.

§ 45.1-161.114. Automated temporary roof support systems.

The Chief shall promulgate regulations requiring automated temporary roof support systems ~~in situations where these systems will improve the safety of miners installing for the installation of~~ roof bolts.

§ 45.1-161.115. Supplies of materials for supports.

A. The operator, or his agent, shall provide at or near the working places an ample supply of suitable materials of proper size with which to secure all roofs, ribs and faces of working places in a safe manner. Suitable supply materials shall be provided for variations in seam height. If the operator, or his agent, fails to provide such suitable materials, the mine foreman shall cause the miners to withdraw from the mine, or the portion thereof affected, until such material or supplies are received.

B. Safety posts, jacks or temporary crossbars shall be set close to the face before other operations are begun and as needed thereafter, if miners go in by the last permanent roof support.

C. Unless an automated temporary roof support system is used, safety posts or jacks shall be used to protect the miners when roof material is being taken down, crossbars are being installed, roof bolt holes are being drilled, roof bolts are being installed, or when any other work is being performed that would reasonably require roof support to protect the miners involved.

D. The operator, or his agent, shall make immediately available for emergency use at each mine site two 40-ton jacks or *two* equivalent lifting devices.

§ 45.1-161.116. Examination and testing of roof, face and ribs.

A. The operator, or his agent, shall instruct all miners ~~in the proper~~ *how to make visual examinations and sound and vibration* testing of roof, face and ribs.

B. Miners exposed to danger from falls of roof, face and ribs shall examine and test the roof, face and ribs before starting work or before starting a machine and as frequently thereafter as may be necessary to ensure safety. When hazardous conditions are found, miners discovering them shall correct such conditions immediately by taking down the loose material, by proper timbering, or installation of proper roof support before work is continued or any other work is done, or shall vacate the place.

C. At least once each shift, or more often if necessary, the mine foreman or other certified person shall examine and test the roof, face and ribs of all active working sections where coal is being produced while miners are working therein, ~~and shall keep a record of such examination in an official record book at the mine. The record book shall be open for inspection by interested persons.~~ Any place in which a hazardous condition is found by the mine foreman shall be made safe in his presence or under his direction, or the miners shall be withdrawn from such place. *Such hazardous conditions and*

corrective actions taken shall be recorded in the on-shift record book at the mine.

§ 45.1-161.117. Mapping of roof falls.

The operator, or his agent, shall report promptly to the Department any unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use, or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage, including those which do not result in a lost-time injury. Such *Unplanned roof falls that are required to be reported in accordance with § 45.1-161.78* shall be marked on a map of the mine to indicate the specific location of the fall. Such reports shall be conspicuously posted near the main entrance of the mine, and shall also be kept on file for review by interested persons. Copies of such reports shall be furnished to the employee's safety committee, if applicable.

§ 45.1-161.118. Unsafe conditions.

A. No person shall work or travel under unsupported roof ~~unless in accordance with subpart C of 30 CFR Part 75~~ *except to install temporary supports in accordance with the approved roof control plan.*

B. If roof, face or rib conditions are found to be unsafe, no person shall start any other work until the conditions have been corrected by taking down loose material or securely supporting the roof, face or ribs.

C. A bar of proper length shall be used to pull down any loose material discovered.

§ 45.1-161.121. Mining in proximity to gas and oil wells.

A. *Except as provided in subsection D*, an operator who plans to remove coal, drive any passage or entry, or extend any workings in any mine, within 500 feet of any gas or oil well already drilled *into the projected mine workings* or in the process of being drilled *into the projected mine workings* shall file with the Chief a notice that mining is taking place or will take place. The notice shall include a copy of parts of the maps and plans required under § 45.1-161.64 which show the mine workings and projected mine workings which are within 500 feet of the well. The operator shall simultaneously mail copies of such notice, maps and plans by certified mail, return receipt requested, to the well operator and the Gas and Oil Inspector. Each notice shall contain a certification made by the operator that he has complied with the provisions of this subsection.

B. Subsequent to the filing of the notice required by subsection A, the operator may proceed with mining operations in accordance with the maps and plans; however, without the prior approval of the Chief, he shall not remove any coal, drive any entry, or extend any workings in any mine closer than 200 feet to any gas or oil well already drilled *into the projected mine workings* or in the process of being drilled *into the projected mine workings*.

C. The Chief shall promulgate regulations which prescribe the procedure to be followed by mine operators in petitioning the Chief for approval to conduct such activities within 200 feet of a gas or oil well or a vertical ventilation hole *drilled or in the process of being drilled into the projected mine workings*. Each operator who files such a petition shall mail copies of the petition, maps and plans by certified mail, return receipt requested, to the well operator and the Gas and Oil Inspector no later than the day of filing. The Gas and Oil Inspector and the operator of the gas or oil well or vertical ventilation hole shall have standing to object to any petition filed under this section. Such objections shall be filed within ten days following the date such petition is filed.

D. *Procedures for safely mining in proximity to or through coalbed methane wells or vertical ventilation holes developed for methane drainage in a mine shall be addressed in the bleeder system plan for that mine required by § 45.1-161.220.*

§ 45.1-161.123. Face and other equipment.

A. The cutter chains of mining machines shall be locked securely by mechanical means or electrical interlocks, while such machines are parked or being trammed.

B. Drilling in rock shall be conducted wet or by other means of dust control.

C. Electric drills or other electrically operated rotating tools intended to be held in the hands shall have the electric switch constructed so as to break the circuit when the hand releases the switch, or shall be equipped with properly adjusted friction or safety clutches.

D. While ~~remote control~~ equipment is in operation or is being trammed, no miner shall position himself or be ~~permitted~~ *placed in a place of danger pinch point* between such equipment and the face or ~~walls ribs~~ *of the mine or another piece of equipment in the mine.*

E. All equipment raised for repairs or other work shall be securely blocked prior to persons positioning themselves where the falling of such equipment could create a hazardous condition.

§ 45.1-161.124. Shop and other equipment.

A. The following items of shop and other equipment shall be guarded and maintained adequately:

1. Gears, sprockets, pulleys, fan blades or propellers, friction devices and couplings with protruding bolts or nuts;
2. Shafting and projecting shaft ends that are within seven feet of floor or platform level;
3. Belt, chain or rope drives that are within seven feet of the floor or platform;
4. Fly wheels, provided that fly wheels extending more than seven feet above the floor shall be guarded to a height of at least seven feet;
5. Circular and band saws and planers;

6. Repair pits, provided that guards shall be kept in place when the pits are not in use;
7. Counterweights; and
8. The approach to mine fans shall be guarded.

B. Machinery shall not be repaired or ~~oiled~~ *serviced* while the machinery is in motion; however, this shall not apply where safe remote ~~oiling~~ devices are used.

C. A guard or safety device removed from any machine shall be replaced before the machine is put in operation.

D. Mechanically operated grinding wheels shall be equipped with (i) safety washers and tool rests; (ii) substantial retaining hoods, the hood opening of which shall not expose more than a ninety degree sector of the wheel; and (iii) eyeshields, unless goggles are worn by the miners. Retaining hoods shall include either a device to control and collect excess rock, metal or dust particles, or a device providing equivalent protection to the miners operating such machinery.

§ 45.1-161.129. Blasting practices; penalty.

A. All explosives shall be of the permissible type, ~~and all blasting methods shall be approved by the Chief~~ *except where addressed in the plan for shaft and slope development required by § 45.1-161.250 B.*

B. All explosives shall be used as follows:

1. Explosives shall be fired only with electric detonators of proper strength;
2. Explosives shall be fired with permissible shot-firing units, unless firing is done from the surface when all persons are out of the mine, or a ~~permit is secured to use other appropriate devices in accordance with a plan approved by the Chief;~~
3. Boreholes in coal shall not be drilled beyond the limits of the cut where the coal is cut nor into the roof or floor;
4. Boreholes shall be cleaned, and shall be checked to see that they are placed properly and are of correct depth in relation to the cut, before being charged;
5. All blasting charges in coal shall have a burden of at least eighteen inches in all directions if the height of the coal permits;
6. Boreholes shall be stemmed with at least twenty-four inches of incombustible material, or at least one-half of the length of the hole shall be stemmed if the hole is less than four feet in depth. The Chief may approve the use of other stemming devices;
7. Examinations for gas shall be made immediately before firing each shot or group of multiple shots, and after blasting is completed;
8. Shots shall not be fired in any place where a methane level of one percent or greater can be detected with a permissible methane detector;
9. Without ~~permit~~ *approval*, charges exceeding one and one-half pounds, but not exceeding three pounds, shall be used only if (i) boreholes are six feet or more in depth; (ii) the explosives are charged in a continuous train, with no cartridges deliberately deformed or crushed; (iii) all cartridges are in contact with each other, with the end cartridges touching the back of the hole and the stemming, respectively; and (iv) ~~Class A or Class B~~ permissible explosives are used; however, the three-pound limit shall not apply to solid rock work;
10. Any solid shooting shall be done in compliance with conditions prescribed by the Chief;
11. Shots shall be fired by a certified underground shot firer;
12. Boreholes shall not be charged while any other work is being done at the face, and the shot or shots shall be fired before any other work is done in the zone of danger from blasting except that which is necessary to safeguard the miners;
13. Only nonmetallic tamping bars, including a nonmetallic tamping bar with a nonsparking metallic scraper on one end, shall be used for charging and tamping boreholes;
14. The leg wires of electric detonators shall be kept shunted until ready to connect to the firing cable;
- ~~15. Shots shall not be fired from the power of signal circuit while any person is in the mine;~~
- ~~16.~~ 15. The roof and faces of working places shall be tested before and after firing each shot or group of multiple shots;
- ~~17.~~ 16. Ample warning shall be given before shots are fired, and care shall be taken to ascertain that all miners are in the clear;
- ~~18.~~ 17. All miners shall be removed from the working place and the immediately adjoining working place or places to a distance of at least 100 feet and accounted for before shots are fired;
- ~~19.~~ 18. Mixed types or brands of explosives shall not be charged or fired in any borehole;
- ~~20.~~ 19. Adobe (mudcap) or other open, unconfined shots shall not be fired in any mine except those types approved by the Mine Safety and Health Administration and the Chief;
- ~~21.~~ 20. Power wires and cables that could contact blasting cables or leg wires shall be de-energized during charging and firing;
- ~~22.~~ 21. Firing shots from a properly installed and protected blasting circuit may be permitted by the Chief;
- ~~23.~~ 22. No miner shall return, or shall be allowed to return, to the working place after the firing of any shot or shots until the smoke has reasonably cleared away;

24. 23. Before returning to work and beginning to load coal, slate or refuse, a miner shall make a careful examination of the condition of the roof and do what is necessary to make the working place safe; and

~~25.~~ 24. An examination for fire shall be made of the working area after any blasting.

C. It shall be unlawful for an operator, his agent, or mine foreman to cause or permit any solid shooting to be done without first having obtained a written permit from the Chief. It shall be unlawful for any miner to shoot coal from the solid without first obtaining permission to do so from the operator, his agent, or mine foreman. A violation of this subsection is a Class 1 misdemeanor.

§ 45.1-161.133. Haulage roads.

A. The roadbed, rails, joints, switches, frogs and other elements of the track of all haulage roads shall be constructed, installed and maintained in a manner that ensures their safe operation. In determining their safety, consideration shall be given to the speed of equipment, and type of haulage operations conducted on the haulage roads.

B. Haulage tracks ~~and other haulage areas~~ shall be kept free of accumulations of coal spillage and debris *and water shall not be allowed to accumulate over the top of the rail.*

C. ~~Roadbeds shall be kept well drained~~ *Off-track haulage equipment operators shall observe haulage roads for hazardous conditions during the course of travel and shall promptly correct or report to the mine foreman any hazardous condition observed.*

D. ~~Shuttle ear~~ *Off-track haulage roads shall be maintained reasonably free of bottom irregularities, excess spillage, debris, and wet or muddy conditions that make controlling a shuttle ear off-track equipment difficult, and accumulations of water over such areas of haulage roads and in such depths that water could enter electrical panels and create potentially hazardous conditions.*

§ 45.1-161.134. Track switches and rails.

A. All track switches shall be provided with properly installed throws, latches, and bridle bars.

B. All track switches, other than those in rooms and in entry development, shall be equipped with properly installed guardrails.

C. All switch throws and stands shall be installed on the side of the track where clearance is provided.

D. Rails shall be secured at all joints by plates or welds.

~~E. Where track haulage is used, sidetracks shall be provided as near as possible to the working places.~~

§ 45.1-161.135. Clearance on haulage roads.

A. Track haulage roads in entries, rooms, and crosscuts shall have a continuous clearance on one side of at least twenty-four inches from the farthest projection of moving traffic. The clearance shall be kept free of any obstruction to a height of ~~6 1/2 feet~~ *where permitted by the height of the coal seam.*

B. Track haulage roads in entries, rooms, and crosscuts shall have a continuous clearance, on the side opposite the clearance required by subsection A, of at least six inches from the farthest projection of moving traffic. When not possible to maintain such clearance, close clearance signs shall be posted inby and outby the affected area.

C. Haulage roads where trolley lines are used shall have the clearance required by subsection A on the side of the track opposite the trolley lines. This requirement shall not apply where the trolley lines are 6 1/2 feet or more above the rail.

D. The clearance space on all track haulage roads shall be kept free of loose rock, loose coal, supplies, and other loose materials. If the clearance space exceeds twenty-four inches, not more than twenty-four inches of the clearance space shall be required to be kept free of such materials.

E. All parallel tracks shall be installed so as to provide a clearance of at least twenty-four inches between the outermost projections of passing traffic.

F. Ample clearance shall be provided (i) at conveyor loading heads, (ii) at conveyor control panels, and (iii) along conveyor lines.

G. Belt conveyors shall be equipped with control switches to automatically stop the driving motor in the event the belt is stopped by slipping on the driving pulley, by breakage or other accident.

§ 45.1-161.140. Maintenance of equipment.

Locomotives, mine cars, shuttle cars, supply cars, conveyors, self-propelled mobile equipment, and all other ~~transportation~~ equipment shall be maintained in a safe operating condition.

§ 45.1-161.141. Self-propelled equipment.

A. All self-propelled mobile transportation and haulage equipment for use underground shall be equipped with safe seating facilities for the person operating the equipment unless equipped for remote control operation. Where seating facilities are provided on self-propelled mobile equipment, the person operating such equipment shall be seated before the equipment is put into motion.

B. All track-mounted equipment shall be equipped with proper lifting devices, for the rerailing of such equipment.

C. An audible warning device and headlights shall be provided on each locomotive, shuttle car and any other self-propelled mobile transportation *and haulage* equipment.

D. A ~~permissible~~ trip light *capable of being seen for at least 300 feet underground* shall be used on

the rear of trips pulled and on the front of pushed trips and trips lowered in slopes; however, trip lights need not be used ~~(i) on ears being shifted to and from loading machines, (ii) on ears being handled at loading heads, (iii) during gathering operations at working faces, or (iv) where locomotives are used on each end of a trip.~~

E. Slides, skids, or other adequate means shall be used on descending trips on grades where the locomotive is not adequate to control the trip, and, where practicable, a drag shall be used on ascending trips on steep grades. *Effective means, including but not limited to trailing locomotives, slides, skids or drags shall be used during track haulage to ensure safe control is maintained when grades create a potential hazard.*

F. Where block signals are used, procedures shall be established *in writing* to safely control traffic movement within the system *and shall be posted and reviewed with all mine personnel.*

§ 45.1-161.143. Transportation of material.

A. ~~Equipment or material~~ being transported shall be loaded in a manner to protect the ~~motorman or brakeman operator and other personnel~~ from sliding equipment or material.

B. ~~Timbers and other materials not necessary for the operation of locomotives, cutting machines, loading machines, and coal-drilling machines shall not be transported on such equipment. Materials and supplies not necessary for the operation of self-propelled mobile equipment shall not be transported on such equipment, except for when the mobile equipment is designed to carry such materials or supplies and a hazard is not created. Only small hand tools and supplies which do not create hazards may be transported in the same compartment of personnel carriers where miners are seated.~~

§ 45.1-161.144. Securing cars.

A. Standing cars on any track, unless held effectively by brakes, shall be properly blocked or spragged.

B. Positive-acting stopblocks or derails shall be used where necessary to protect miners from danger of ~~moving or runaway haulage rail equipment. Derails shall be located where grades at the entrance and other locations in the mine create potential collision hazards.~~

C. *Safety chains, steel ropes, or other effective devices capable of holding the load shall be used to prevent runaway man-trip or other supply cars.*

§ 45.1-161.147. Operation of equipment.

A. Operators of ~~shuttle ears self-propelled haulage equipment~~ shall face in the direction of travel *except when the equipment is being loaded and is under the boom of the loading equipment.*

B. ~~All trips and locomotives shall come to a complete stop before ears are coupled or uncoupled by hand. Track haulage cars which are regularly coupled and uncoupled shall be equipped with automatic couplers which couple on impact and uncouple without the need for persons to go between the ends of such equipment.~~

C. Persons operating self-propelled haulage equipment shall sound a warning before starting such equipment and on approaching curves, sidetracks, doors, curtains, manway crossings, or any other place where persons are or are likely to be.

D. All rail equipment shall be operated at speeds which are safe for the condition of the rail installation, grades and clearances encountered. When rail equipment is being operated at normal safe speeds, a distance of 300 feet shall be maintained from the rear of other rail equipment in operation except trailing locomotives that are an integral part of the trip.

E. All persons shall stand in the clear during switching operations.

F. No two pieces of self-propelled mobile mining equipment traveling in opposite directions inside a coal mine shall be allowed to pass each other while both are in motion on the same haulage road.

§ 45.1-161.150. Man-trips.

A. Man-trips operated by means of locomotives shall be pulled and at safe speeds consistent with the condition of roads and type of equipment used, and shall be so controlled that they can be stopped within the limits of visibility.

B. Each man-trip shall be under the charge of an authorized person and shall be operated independently of any loaded trip.

C. ~~Man-trip ears~~ *Man-trips* shall be maintained in safe operating condition, and in sufficient number to prevent becoming overloaded.

D. No person shall ride under a trolley wire other than in suitably covered man-cars. Covered man-cars shall not be required under trolley wires that are guarded or positioned in accordance with subsection F of § 45.1-161.187.

E. Other than small hand tools carried on the person, supplies or tools shall not be transported in the same car or cage with miners on any man-trip, except in special compartments in such cars.

F. Miners shall not board or leave moving man-trip cars. Miners shall remain seated while in moving cars, and shall proceed in an orderly manner to and from man-trips.

§ 45.1-161.151. Man-trip loading and unloading areas.

A. ~~A waiting station with sufficient room, ample clearance from moving equipment, and adequate seating facilities shall be provided where miners are required to wait for man-trips or man-cages. Areas used regularly for loading or unloading man-trips or man-cages shall be kept clear, free of obstructions,~~

and with ample clearance for moving equipment. Miners shall remain in such station area until the man-trip or man-cage is ready to load. ~~Miners shall be permitted to unload from man-trips only at man-trip stations, except that miners assigned to special duties along main travel ways may unload at any point if clearance from moving equipment is provided.~~

B. Trolley and power wires shall be guarded effectively at ~~man-trip stations~~ *areas where persons regularly load or unload from man-trips or man-cages* where there is a possibility of any person coming in contact with energized electric wiring while boarding or leaving the man-trip. ~~De-energizing switches, used in conjunction with signal lights to indicate when such wires have been de-energized, may be used in lieu of guards at man-trip stations.~~

§ 45.1-161.152. Transporting miners by belts.

A. When belts are used for transporting miners, such belts shall be free of loose materials, and a minimum clearance of at least eighteen inches shall be maintained between the belt and the roof or crossbars, projecting equipment, cap pieces, overhead cables, wiring, and other objects. Belts used for transporting miners shall be equipped with emergency stop cords for their entire length.

B. The belt speed shall not exceed (i) 250 feet per minute while miners are being transported where the clearance between the belt and overhead roof or projections is between eighteen inches and twenty-four inches and (ii) 300 feet per minute where the overhead clearance is twenty-four inches or more. The use of conveyor belts to transport miners shall be prohibited if the clearance between the belt and overhead is less than eighteen inches. Such belt shall be stopped while miners are boarding or leaving.

C. The space between miners riding on a belt line shall be not less than five feet.

D. Adequate clearance and proper illumination shall be provided where miners board or leave conveyor belts.

~~E. A mine foreman or authorized person shall be in attendance while miners are boarding or leaving belts.~~

§ 45.1-161.158. Inspections of hoisting equipment.

A. Before hoisting or lowering miners in a shaft, the hoisting engineer shall operate empty cages up and down each shaft at least one round trip at the beginning of each shift and after the hoist has been idle for one hour or more.

B. Before hoisting or lowering miners in slope and surface incline hoisting, the hoisting engineer shall operate empty cages at least one round trip at the beginning of each shift and after the hoist has been idle for one hour or more.

C. The hoisting engineer, at the time the inspections required by subsections A and B are performed, shall (i) inspect all cable or rope fastenings at all cages, buckets, or slope cars; (ii) inspect hammer locks and pins, thimbles, and clamps; (iii) inspect safety chains on buckets, cage or slope cars; (iv) inspect the braking system for malfunctions; (v) clean all excess oil and extraneous materials from the hoist housing construction; (vi) inspect the overwind, overtravel, and lilly switch or control from stopping at the collar and within 100 feet of the work deck; and (vii) check communications between the top house, work deck and work deck tugger house.

D. Hoisting rope on all cages or trips shall be inspected at the beginning of each shift by the hoisting engineer.

E. A test of safety catches on cages shall be made at least once each month. A written record shall be kept of such tests, and such record shall be available for inspection by interested persons.

F. Hoisting equipment including the headgear, cages, ropes, connections, links and chains, shaft guides, shaft walls, and other facilities shall be inspected daily by an authorized person designated by the operator. Such person shall also inspect all bull wheels and lighting systems on the head frame. Such person shall report immediately to the operator, or his agent, any defects found, and any such defect shall be corrected promptly. The person making such examination shall make a daily permanent record of such inspection, which shall be available for inspection by interested persons. *If a hoist is used only during a weekly examination of an escapeway, then the inspection required by this subsection shall only be required to be completed weekly before the examination occurs.*

G. Subsections A, B, C, and D shall not apply to automatically operated elevators.

§ 45.1-161.159. Hoisting engineers.

A. A certified hoisting engineer shall be either on duty continuously, or available within a reasonable time as determined by the Chief, to provide immediate transportation while any person is underground, where miners are transported into or out of underground areas of a mine by hoists or on surface inclines.

B. When miners are being hoisted or lowered in shafts, slopes, or on surface inclines, the loading and unloading of miners and movement of the cage, car, or trip shall be under the direction of an authorized person.

C. Subsections A and B shall not apply to automatically operated elevators that can be safely operated by any miner; however, a person qualified as an automatic elevator operator shall be available at such elevators within a reasonable time as determined by the Chief.

D. No operator, or his agent, of any mine worked by shaft, slope or incline shall place in charge of

any engine or drum used for lowering or hoisting miners any but competent and sober hoisting engineers. No hoisting engineer in charge of such machinery shall allow any person, except such as may be designated for such purpose by the operator, or his agent, to interfere with any part of the machinery. No person shall interfere with or intimidate the *hoisting engineer* or ~~drum runner~~ *automatic elevator operator* in the discharge of his duties.

§ 45.1-161.162. Mine openings.

A. Except as provided in § 45.1-161.164, there shall be at least two travel ways, entries, or openings to the surface from each section of a mine worked. All longwall panels shall be developed with at least three entries; however, if new technology becomes available pursuant to which two-entry systems may be safely developed, such technology may be used, with the approval of the Chief.

B. One of the required travel ways may be the haulage road.

C. The first opening shall not be made through an adjoining mine. The second opening may be made through an adjoining mine.

D. One of the required travel ways shall be designated as the primary ~~designated~~ *escapeway and shall be in intake air*.

E. *After July 1, 1999, new surface structures where miners congregate or where the mine map or other official records are kept at the mine shall be offset not less than fifteen feet from the nearest side of any mine opening, or otherwise located to be out of the direct line of possible forces coming out of the mine should an explosion occur, unless otherwise approved by the Chief.*

§ 45.1-161.165. Maintenance of mine openings.

Mine openings ~~required pursuant to this article~~ *that are used for entering and leaving the mine* shall be kept in good condition, and shall at all times be ~~reasonably maintained in a safe and convenient for entering and leaving the mine condition~~.

§ 45.1-161.170. Unused openings.

All unused, ~~and abandoned, and isolated~~ surface openings shall be effectively ~~protected~~ *closed or fenced* against unauthorized entrance.

§ 45.1-161.173. Inspection of electric illumination equipment.

All ~~electric illumination equipment located~~ *lamps, extension lights and permissible portable illumination such as cap lamps and flashlights that are used for personal illumination* underground shall be inspected by an authorized person at least once per week, and more often if necessary, to ensure safe operating conditions. Such equipment located at the surface shall be inspected by an authorized person at least once per month, and more often if necessary, to ensure safe operating conditions. Any defect found shall be corrected.

§ 45.1-161.181. Surface electrical installations.

A. Overhead high-potential power lines shall be placed at least fifteen feet above the ground and twenty feet above driveways, shall be installed on insulators, and shall be supported and guarded to prevent contact with other circuits.

B. Surface transmission lines including trolley circuits shall be protected against short circuits and lightning. Each ~~exposed~~ power circuit that leads underground shall be equipped with ~~approved~~ lightning arrestors ~~at the point~~ *within 100 feet of* where the circuit enters the mine.

C. Electric wiring in surface buildings shall be installed so as to prevent fire and contact hazards.

§ 45.1-161.186. Power circuits.

A. All underground power wires and cables shall have adequate current-carrying capacity, shall be guarded from mechanical injury, and shall be installed in a permanent manner.

B. Wires and cables not encased in armor shall be supported by well installed insulators and shall not touch combustible materials, roof, or ribs; however, this shall not apply to ground wires, grounded power conductors, and trailing cables.

C. Power wires and cables installed in belt-haulage slopes shall be insulated adequately and buried in a trench not less than twelve inches below combustible material, unless encased in armor or otherwise fully protected against mechanical injury.

D. Splices *and repairs* in power cables shall be made in accordance with the following:

1. Mechanically strong with adequate electrical conductivity;
2. Effectively insulated and sealed so as to exclude moisture; ~~and~~
3. If the cable has metallic armor, mechanical protection and electrical conductivity equivalent to that of the original armor; *and*
4. *If the cable has metallic shielding around each conductor, then the new shielding shall be equivalent to that of the original shielding.*

E. All underground *high-voltage* transmission cables shall be:

1. Installed only in regularly inspected airways;
2. Covered, buried, or placed on insulators so as to afford protection against damage by derailed equipment if installed along the haulage road;
3. Guarded where miners regularly work or pass under them unless they are 6 1/2 feet or more above the floor or rail, or are well insulated;
4. Securely anchored, properly insulated, and guarded at ends; and

5. Covered, insulated or placed to prevent contact with trolley circuits and other low-voltage circuits.

F. All power wires and cables shall be insulated adequately where they pass into or out of electrical compartments, where they pass through doors and stoppings, and where they cross bare power wires.

G. Where track is used as a power conductor:

1. Both rails of main-line tracks shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet. If the rails are paralleled with a feeder circuit of like polarity, such paralleled feeder shall be bonded to the track rails at intervals of not more than 1,000 feet;

2. At least one rail on secondary track-haulage roads shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet; *and*

3. Track switches on entries shall be well bonded; *and*

4. ~~Rails shall not be used as power conductors in rooms underground.~~

§ 45.1-161.187. Trolley wires and feeder wires.

A. Trolley wires and trolley feeder wires shall be installed on the side of the entry opposite the clearance space and shelter holes, except where the wires are guarded or 6 1/2 feet or more above the top of the rail.

B. Trolley-wire hangers shall be so spaced that the wire may become detached from any one hanger without creating a shock hazard.

C. Trolley wires shall be aligned properly and installed on insulated hangers at least six inches outside the rail.

D. Trolley wires and trolley feeder wires shall be provided with cut-out switches at intervals of not more than 1,500 feet and near the beginning of all branch lines.

E. Trolley wires and trolley feeder wires shall be kept taut and not permitted to touch the roof, ribs, timbers or any combustible material.

F. Trolley wires and trolley feeder wires shall be guarded adequately at both sides of doors and at all places where it is necessary to work or pass under them, unless they are more than six and one-half feet above the top of the rail.

~~G. Trolley wires and trolley feeder wires shall not be installed in rooms.~~

~~H. G. Trolley wires and trolley feeder wires shall not extend beyond any open crosscut between intake and return airways, and shall be kept at least 150 feet from any active, open pillar workings.~~

~~I. H. Trolley wires and trolley feeder wires shall be guarded, anchored securely, and insulated properly at the ends.~~

~~J. I. Trolley wires and trolley feeder wires shall be installed only in intake air.~~

~~K. J. Trolley wires or other exposed conductors shall not carry more than 300 volts.~~

§ 45.1-161.188. Grounding.

A. All metallic sheaths, armors, and conduits enclosing power conductors shall be electrically continuous throughout and shall be grounded effectively.

B. Metallic frames, casing, and other enclosures of stationary electric equipment that can become "alive" through failure of insulation or by contact with energized parts shall be grounded effectively, or equivalent protection shall be provided.

~~C. When electric equipment is operated from three-phase alternating current circuits originating in transformers connected to provide a neutral point, a continuous grounding conductor of adequate size shall be installed and connected to the neutral point and to the frames of the power-utilizing equipment. Such grounding conductors shall be grounded at the neutral point and at intervals along the conductor if feasible. A suitable circuit breaker or switching device shall be provided having a ground-trip coil connected in series with the grounding conductor to provide effective ground-fault tripping. Three-phase alternating current circuits used underground shall contain either a direct or derived neutral which shall be grounded through a suitable resistor at the power center, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend with the power conductors and serve as the grounding conductor for the frames of all the electrical equipment supplied power from that circuit. High-voltage circuits extending underground shall be supplied with a grounding resistor of a proper Ohmic value located on the surface to limit the voltage drop in the grounding circuit external to the resistor to not more than 100 volts under fault conditions. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system. All resistance-grounded alternating circuits used underground shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure the continuity of the ground conductor.~~

§ 45.1-161.189. Circuit breakers and switches.

A. Automatic circuit breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and power circuits against excessive overload; however, this shall not apply to locomotives operated regularly on grades exceeding five percent. Wires or other conducting materials shall not be used as a substitute for properly designed fuses, and circuit breaking devices shall be maintained in good safe operating condition.

B. *An automatic circuit breaker of correct type and capacity shall be installed on each resistance*

grounded circuit used underground. Such circuit breaker shall be located at the power source and equipped with devices to provide protection against under-voltage, grounded phase, short circuit and overcurrent.

~~B. C.~~ Operating controls, such as switches, starters, and switch buttons, shall be so installed that they are readily accessible and can be operated without danger of contact with moving or live parts.

~~C. D.~~ Disconnecting switches shall be installed underground in all main power circuits within approximately 500 feet of the bottoms of shafts and boreholes, and at other places where main power circuits enter the mine.

~~D. E.~~ Electric equipment and circuits shall be provided with switches or other controls of safe design, construction and installation.

~~E. F.~~ ~~Dry wooden platforms,~~ Insulating mats, or other electrically nonconductive material shall be kept in place at each ~~switchboard,~~ power-control switch, and at stationary machinery where shock hazards exist.

~~F.~~ Resistors or rheostats shall be installed in such a manner as not to create a fire hazard, and shall be guarded adequately against personal contact.

~~G.~~ When not in use, power circuits underground shall be de-energized on idle days and idle shifts or protected against short circuits in accordance with the load on such circuits. *Circuit breakers, disconnecting devices and switches shall be marked for identification.*

~~H.~~ Electric parts, such as switches, circuit breakers, rheostats, relays and fuses, shall be installed on switchboards or mounted on incombustible bases of slate or equivalent insulating material.

§ 45.1-161.191. Communication systems.

A. Telephone service or equivalent two-way communication facilities shall be provided between the top and each landing of main shafts and slopes. A telephone or equivalent two-way communication facility shall be located on the surface within 500 feet of all main portals, and shall be installed either in a building or in a box-like structure designed to protect the facilities from damage by inclement weather. At least one of these communication facilities shall be at a location where a ~~competent~~ *an authorized* person who is always on duty when miners are underground can see or hear the facility and respond immediately in the event of an emergency.

B. Telephone lines, other than cables, shall be carried on insulators, installed on the opposite side from power or trolley wires, and where they cross power or trolley wires, they shall be insulated adequately.

C. Lightning arrestors shall be provided at the points where telephone circuits enter the mine and at each telephone on the surface. *Where the telephone circuit enters a building or structure, the lightning arrestor is only required where the circuit enters such building or structure.*

D. If a communication system other than telephones is used and its operation depends entirely upon power from the mine electric system, means shall be provided to permit continued communication in the event the mine electric power fails or is cut off.

E. Communication systems equipped with audible and visual signals that become operative when telephone communication is being established between the phones of the communication station on the surface and the underground working sections shall be provided.

F. The Chief shall promulgate regulations governing any disruption of communication in mines.

§ 45.1-161.193. Electric equipment.

A. Electric equipment *taken into or used in by the last open crosscut or in other than intake air* shall be permissible equipment. ~~Electric face equipment shall be permissible equipment.~~

B. Permissible equipment used in ~~underground mines areas specified in subsection A~~ shall be maintained in permissible condition.

C. Electric equipment shall not be taken into or operated in any place where a methane level of one percent or more is detected.

D. Underground installations of electric face equipment shall not exceed 300 volts direct current. Alternating current circuit installations *of a nominal voltage exceeding 1000 volts providing power to equipment at the working face* shall be provided with necessary safety devices and components, ~~and shall be subject to the approval of the Chief.~~

§ 45.1-161.194. Trailing cables.

A. Trailing cables ~~purchased for or transferred to any mine for use~~ *used* underground shall be flame-resistant cables.

B. Trailing cables shall be provided with suitable short-circuit protection and means of disconnecting power from the cable. Power connections made in other than intake air shall be by means of permissible connectors.

C. Temporary splices in trailing cables shall be made in a workmanlike manner, mechanically strong, and well insulated.

D. No more than one temporary, unvulcanized splice shall be allowed in a trailing cable.

E. Permanent splices *or repairs* in trailing cables shall be made as follows:

1. They shall be mechanically strong with adequate electrical conductivity and flexibility;
2. They shall be effectively insulated and sealed so as to exclude moisture; ~~and~~

3. The finished splice *or repair* shall be vulcanized or otherwise treated with suitable materials to provide flame-resistant properties and good bonding to the outer jacket; *and*

4. *If the cable has metallic shielding around each conductor, then the new shielding shall be equivalent to that of the original shielding.*

F. Trailing cables shall be protected against mechanical injury.

§ 45.1-161.195. Inspection of electric equipment and wiring; checking and testing methane monitors.

A. Electric equipment and wiring shall be inspected by a certified person at least weekly if located underground, and at least monthly if located on the surface, and more often if necessary to assure safe operating conditions, and any defect found shall be corrected. Records of such examination shall be maintained at the mine for a period of one year.

B. A functional check of methane monitors on electrical face equipment shall be conducted to determine that such monitors are de-energizing the electrical face equipment properly. Such check shall be made on each production shift and shall be conducted by the equipment operator in the presence of a mine foreman, and shall be recorded in the on-shift report of the mine foreman pursuant to § 45.1-161.213.

C. Weekly calibration tests on methane monitors on electrical face equipment to determine the accuracy and operation of such monitors shall be conducted and a record of the results maintained.

D. Required methane monitors shall be maintained in permissible and proper operating condition.

§ 45.1-161.196. Repairs to circuits and electric equipment.

No electrical work shall be performed on low-voltage, medium-voltage, or high-voltage distribution circuits or equipment, except by a certified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a certified person. *All high-voltage circuits shall be grounded before repair work is performed.* Disconnecting devices shall be locked out and suitably tagged by the persons who perform ~~such electrical or mechanical work on such circuits or equipment connected to the circuits~~, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such persons. Locks and tags shall be removed only by the persons who installed them or, if such persons are unavailable, by certified persons authorized by the operator or his agent. However, miners may, where necessary, repair energized trolley wires if they wear insulated shoes and lineman's gloves. This ~~shall section does not prohibit qualified repairmen from having power on equipment for making checks on such equipment certified electrical repairmen from making checks on or troubleshooting energized circuits or the performance of repairs or maintenance on equipment by authorized persons once the power is off and the equipment is blocked against motion, except where motion is necessary to make adjustments.~~

§ 45.1-161.197. First aid equipment.

Each mine shall have an adequate supply of first aid equipment as determined by the Chief. Such supplies shall be located on the surface, at the bottom of shafts and slopes, and at other strategic locations near the working faces, as shall be prescribed by the Chief. The first aid supplies, ~~other than blankets, splints, and properly constructed stretchers in good condition~~, shall be encased in suitable sanitary receptacles designed to be reasonably dust-tight and moisture-proof. The supplies shall be available for use of all persons employed in the mine. No first aid material shall be removed or diverted without authorization except in case of injury at the mine.

§ 45.1-161.203. Reporting fires; response.

~~Immediately upon knowledge of serious~~ *In case of any unplanned fire at a mine not extinguished within thirty minutes of discovery*, the operator shall report to the Chief, by the quickest available means, all information known to him. The Chief, based on the information, shall promptly go in person or dispatch a mine inspector to the scene of the fire for consultation, and assist in the extinguishing of the fire and the protection of exposed persons. In the event of a difference of opinion as to measures required, the decision of the Chief or the mine inspector shall be final. The decision of the Chief regarding measures to extinguish the fire and protect persons shall have the force of an order issued pursuant to § 45.1-161.91 if delivered to the operator in writing.

§ 45.1-161.207. Arcs, sparks and flames.

A. The intentional creation of any open arc, open spark or open flame, except as provided in subsection B, shall be prohibited.

B. Welding and cutting with arc or flame or soldering underground in other than a fireproof enclosure ventilated with intake air shall be done ~~only by or~~ under the direct ~~supervision instruction~~ of a ~~competent~~ *certified* person. Such person shall test for methane before and during such operations in underground mines and shall make a diligent search for fire after such operation in all mines. Rock dust or suitable fire extinguishers shall be immediately available during such welding or cutting. Welding operations shall be performed only in well ventilated areas.

§ 45.1-161.209. On-shift examinations.

A. At least once during each shift, and more often if necessary, a certified person shall examine each underground section where coal is produced and any other area where mechanized mining equipment is being installed or removed during the shift. The certified person shall (i) examine for hazardous conditions, (ii) test for methane and oxygen deficiency with a suitable permissible device, and (iii)

determine whether the air is traveling in its regular course and in sufficient volume in each split. Hazardous conditions shall be corrected immediately or the miners shall be withdrawn and the affected area plainly marked with "danger" signs.

B. During each shift that coal is produced, a certified person shall examine for hazardous conditions along each underground belt conveyor entry where a belt conveyor is operated. This examination may be conducted at the same time as the pre-shift examination of the belt conveyors and the belt conveyor entries, if the examination is conducted within three hours before the oncoming shift.

C. Persons conducting the on-shift examination shall determine at the following locations which are underground:

1. The volume of air in the last open crosscut, which means the crosscut in the line of pillars containing the permanent stoppings that separate the intake air courses and the return air courses, of each set of entries or rooms on each working section and areas where mechanized mining equipment is being installed or removed;

2. The volume of air on a longwall or shortwall, including areas where longwall or shortwall equipment is being installed or removed, in the intake entry or entries at the intake end of the longwall or shortwall;

3. The velocity of air at each end of the longwall or shortwall face at the locations specified in the approved ventilation plan required pursuant to the federal mine safety law; and

4. The volume of air at the intake end of any pillar line (i) where a single split of air is used, in the intake entry furthest from the return air course, immediately outby the first open crosscut outby the line of pillars being mined, or (ii) if a split system is used, in the intake entries of each split immediately inby the split point.

~~D. Where intake air is coursed by seals of abandoned areas, such seals shall be leakproof and shall be inspected by a certified person at least once per shift.~~

~~E. D.~~ Inspections for methane shall be made before any electrically driven equipment is taken or operated inby the last open crosscut. Tests shall be made for methane at least once every twenty minutes while such equipment is in operation, or more often if necessary.

~~F. E.~~ Idle or worked-out areas underground, including section belts that have been idle for a period of twenty-four hours, shall be examined by a certified person immediately before miners are permitted to enter or work in such areas.

~~G. F.~~ Examination for gas shall be made by a ~~certified person or competent~~ *an authorized person certified to make gas tests* (i) before taking loading or cutting machines inby the open crosscut nearest the face; (ii) before applying power to machinery that remains at or near the face at not more than twenty-minute intervals during cutting, drilling, or mechanical loading; (iii) before drilling with electric drills; (iv) before blasting; (v) after blasting, before other work is resumed; and (vi) at such other times as may be necessary or designated by the operator or mine inspector for adequate safety.

~~H. G.~~ Examination for hazardous conditions shall be made by an authorized person (i) before taking loading or cutting machines inby the open crosscut nearest the face; (ii) before applying power to machinery that remains at or near the face; (iii) before drilling with electric drills; (iv) before blasting; (v) after blasting, before other work is resumed; and (vi) at such other times as may be necessary or designated by the operator or mine inspector for adequate safety.

~~I. H.~~ Pillar workings shall be examined by a certified person for methane and other hazardous conditions before a fall is made purposely. If methane can be detected at a level of one percent or greater with a permissible methane detection device, it shall be removed, if possible before the fall is made. Where it is not practicable to remove the gas before such fall is made, all electric power shall be cut off that portion of the mine that might be affected, and all miners except those necessary to complete the fall shall be removed from such area.

~~J. I.~~ Daily and on-shift examinations of surface areas of underground coal mines shall be made in accordance with the requirements for daily and on-shift examinations at surface coal mines as provided in § 45.1-161.256.

§ 45.1-161.210. Weekly examinations.

A. ~~Any hazardous condition that cannot be removed within a reasonable time shall be reported to the Chief by the quickest available means.~~ At least every seven days, a mine foreman shall examine unsealed worked-out areas where no pillars have been recovered.

B. At least every seven days, a mine foreman shall evaluate the effectiveness of bleeder systems used under § 45.1-161.220.

C. At least every seven days, a mine foreman shall examine the following locations for hazardous conditions:

1. In at least one entry of each intake air course, in its entirety, so that the entire air course is traveled.

2. In at least one entry of each return air course, in its entirety, so that the entire air course is traveled.

3. In each longwall or shortwall travel way in its entirety, so that the entire travel way is traveled.

4. At each seal along return and bleeder air courses and at each seal along intake air courses not

examined under § 45.1-161.208.

5. In each escapeway so that the entire escapeway is traveled.

6. On each working section not examined under § 45.1-161.208 during the previous seven days.

D. At least every seven days, a certified person shall:

1. Determine the volume of air entering the main intakes and in each intake split;

2. Determine the volume of air and test for methane in the last open crosscut in any pair or set of developing entries or rooms, in the return of each split of air immediately before it enters the main returns and where the air leaves the main returns; and

3. Test for methane in the return entry nearest each set of seals immediately after the air passes the seals.

E. Hazardous conditions shall be corrected immediately. If the condition creates an imminent danger, everyone except those persons necessary to correct the hazardous conditions shall be withdrawn from the area affected to a safe area until the hazardous condition is corrected.

F. Weekly examination is not required during any seven-day period in which no person enters any underground area of the mine. *When a mine is idled or in a nonproducing status with entry only for maintenance of the mine, weekly examinations may be conducted in accordance with a plan approved by the Chief.*

G. Except for certified persons required to make examinations, no person shall enter any underground area of a coal mine if the weekly examination has not been completed within the preceding seven days. The weekly examination may be conducted at the same time as the pre-shift examination.

H. The person making the weekly examinations shall certify by initials, date, and the time that the examination was made. Certifications and time shall appear at enough locations to show that the entire area has been examined.

I. At the completion of any shift during which a portion of a weekly examination is made, a record of hazardous conditions, their locations, and the corrective action taken, and the results and location of air and methane measurements shall be made. The record shall be made by the person making the examination or by a person designated by the operator and shall be countersigned by the mine foreman. If the record is made by a person other than the examiner, the examiner shall verify the record by initials and date. Records shall be retained for at least one year at a surface location at the mine and made available for inspection by department personnel and representatives of miners.

J. Examinations of surface areas of underground coal mines shall be made in accordance with the requirements for weekly examinations at surface coal mines as provided in § 45.1-161.256.

§ 45.1-161.211. Examinations of fans.

A. A daily inspection shall be made of all main fans and machinery connected therewith by an authorized person. The person making the examination shall make a record of the same in a book prescribed for this purpose or by adequate facilities provided to permanently record the performance of the main fan and to give warning of an interruption to a fan. *No daily examination is required on any day in which no person goes underground, except that the examination shall be completed prior to any person entering the mine if the previous day's examination has not been made.*

B. Places ventilated by means of blower fans shall be examined for methane by a certified person before the fan is started at the beginning of the shift and after any interruption of fan operation for five minutes or more during the shift.

C. The blower fan and tubing shall be inspected at least twice during each working shift by a certified person.

§ 45.1-161.213. Record of other examinations.

A. The mine foreman shall read and countersign promptly the daily reports of certified persons, and he shall read and countersign promptly the weekly report covering the examinations for hazardous conditions. Where such reports disclose hazardous conditions, the mine foreman shall take prompt action to have such conditions corrected. The operator, or his agent, shall also read and countersign promptly the daily and weekly reports of the certified persons. *When one individual serves in more than one position that is required to countersign these reports, he shall only be required to sign each report once.*

B. Each day, the mine foreman shall enter a report of the condition of the mine or portion thereof under his supervision, which report shall state clearly the location and nature of any hazardous condition observed by him during an on-shift examination or otherwise reported to him during the day, and the report shall state what action, if any, was taken to remedy such hazardous condition.

C. All records of daily and weekly reports shall be open for inspection by interested persons.

D. A mine foreman or other certified person conducting an examination shall record the results of his examination in ink or indelible pencil in a book kept on the surface for that purpose. The *actual* level of methane detected in any examination shall be recorded in the book. ~~If the methane level detected is less than one-tenth of one percent, the entry shall state "less than 0.1 percent detected."~~ Similar records may be kept at designated stations or offices underground. Any entries made in this book by a certified person other than the mine foreman shall be countersigned daily by the mine foreman.

§ 45.1-161.220. Bleeder systems.

A. All mines shall have a system, which has been approved by the Chief, of bleeder openings of air courses designed to provide positive movement of air through or around ~~abandoned~~ or worked-out areas which is sufficient to prevent a hazardous accumulation of gas in such areas and to minimize the effect of variations in atmospheric pressure. Operators shall submit bleeder system plans which comply with requirements developed by the Chief. The system requirements developed by the Chief shall, at a minimum, address standards for (i) supplemental roof supports, (ii) water accumulation, (iii) continuous movement of gases from gob areas, (iv) methane content, (v) the use and operation of degasification systems, (vi) air flow direction, and content, (vii) ventilation controls. The Chief shall not approve a plan which provides for a methane content exceeding four and one-half percent in bleeder air courses. Failure to comply with an approved plan will be a violation of this section. This section shall not prohibit the sealing of ~~abandoned~~ worked-out areas in accordance with § 45.1-161.228.

B. The mine map requirements of § 45.1-161.64 may be used to depict bleeder system standards specified in this section.

§ 45.1-161.221. Coursing of air.

A. The main intake and return air currents of drifts or slope mines shall not be in a single partitioned opening.

B. All entries driven in coal shall be in sets of two or more.

C. ~~Permanently installed underground battery-charging stations, substations, transformer stations, and stations for electrically operated pumps and compressors shall be ventilated by separate splits of air conducted directly to the main return air courses. Portable substations and battery-charging stations shall be in well ventilated places. Underground transformer stations, battery-charging stations, substations, rectifiers, and water pumps shall be housed in noncombustible structures or areas, or be equipped with an approved fire suppression system. These installations shall be ventilated with intake air that is coursed into a return air course or to the surface, and that is not used to ventilate working places. This requirement does not apply to: (i) rectifiers, power centers with transformers that are either dry-type or contain nonflammable liquid, or battery-charging stations, if they are located at or near the working section and are moved as the working section advances or retreats, (ii) submersible pumps, (iii) permissible pumps and associated permissible switch gear, (iv) pumps located at or near the working section that are moved as the working section advances or retreats, and (v) small portable pumps. Such equipment shall be installed and operated only in well ventilated locations.~~

D. Changes in ventilation that materially affect the main air current or any split thereof shall be made when the mine is not in operation and there are no miners in the mine other than those engaged in changing the ventilation.

E. Each section in a mine shall be ventilated by a separate split of air.

F. *Air used to ventilate belt haulage entries shall not be used to ventilate any working place unless approved by the Chief.*

§ 45.1-161.222. Actions for excessive methane.

A. Tests for methane concentration under this section shall be made by certified or qualified persons trained in the use of an approved detecting device which is properly maintained and calibrated. Tests shall be made at least twelve inches from the roof, face, ribs, and floor.

B. When one percent or more methane is present in a working place or an intake air course, including an air course in which a belt conveyor is located, or in an area where mining equipment is being installed or removed, work shall cease and electrical power shall be de-energized in the affected working place at the equipment except intrinsically safe atmospheric monitoring systems (AMS). Changes or adjustments shall be made to the ventilation system to reduce the concentration to below one percent. Only work to reduce the concentration of methane below one percent shall be permitted. This does not apply to other faces in the entry or slope in which work can be safely continued.

C. When one and one-half percent or more methane is present in a working place or an intake air course, including an air course in which a belt conveyor is located, or an area where mining equipment is being installed or removed, only work necessary to reduce the methane concentration to less than one and one-half percent will be permitted and all other personnel shall be withdrawn from the affected area. Electrically powered equipment in the affected area shall be de-energized and other mechanized equipment shall be shut off except for intrinsically safe atmospheric monitoring systems (AMS).

D. When one percent or more methane is present in a return or split between the last working place on a working section and where that split of air meets another split of air, or the location at which the split is used to ventilate seals or worked-out areas, changes or adjustments shall be made to the ventilation system to reduce the concentration of methane in the return air to less than one percent.

E. When one and one-half percent or more methane is present in a return air split between the last working place on a working section and where that split of air meets another split of air or the location where the split is used to ventilate seals or worked-out areas, everyone except those persons required to perform necessary work to correct the problem shall be withdrawn from the affected area. Other than intrinsically safe atmospheric monitoring systems (AMS), all equipment in the affected area shall be de-energized at the source. No other work shall be permitted in the affected area until the concentration of methane in the return air is less than one percent.

F. An alternative methane level up to one and one-half percent may be allowed in the return air split where the following precautions are met: (i) the quantity of air in the split ventilating the active workings is at least 27,000 cubic feet per minute in the last open crosscut; (ii) the methane content of the air in the split is continuously monitored during mining operations by an intrinsically safe atmospheric monitoring system (AMS) that gives a visual and audible signal on the working section when the methane in the return air reaches one and one-half percent; and (iii) rock dust is continuously applied with a mechanical duster to the return air course during coal production at a location in the air course immediately outby the most inby monitoring point *or inby such point provided the mechanical duster is maintained in a permissible condition and does not adversely affect the AMS*. When one and one-half percent or more methane is present where a return air alternative is applied, all persons shall be withdrawn, except those necessary to improve ventilation, and changes or adjustments shall be made to reduce the concentration of methane in the return air to below one and one-half percent as set forth in subsection E.

G. The concentration of methane in a bleeder split of air immediately before the air in the split joins another split of air, or in a return air course other than described in subsections D and E, shall not exceed two percent.

§ 45.1-161.227. Ventilation with air from certain areas.

Active face workings shall not be ventilated with air that has ~~(i) passed through abandoned and worked-out areas, (ii) passed by the unsealed entrances to abandoned areas, or (iii) has been used to ventilate pillar lines. For purposes of this section, areas within a panel shall not be deemed abandoned until they are inaccessible or sealed.~~ This section shall not apply to air which is being used to ventilate an active pillar line and rooms which are necessary to establish and maintain the pillar line.

§ 45.1-161.228. Worked-out areas.

A. The openings to ~~abandoned worked-out areas shall be fenced off so no person can enter, and posted with danger signs shall be posted upon such fencing to restrict entry.~~

B. All ~~abandoned worked-out areas shall be either sealed or ventilated.~~

C. Where practice is to seal ~~abandoned worked-out areas~~, the sealing shall be done in accordance with sealing provisions of the approved bleeder plan.

§ 45.1-161.231. Examination of mines for explosive gas and other hazardous conditions.

A. Certified persons whose regular duties require them to inspect working places in any mine for hazardous conditions shall have in their possession, and shall use, when underground, a permissible methane detector or other permissible device capable of detecting methane and oxygen deficiency.

B. A sufficient number of permissible methane detectors or other permissible devices capable of detecting methane shall be kept at each mine inby the last open crosscut. All miners shall be trained in the operation of the device. Any miners working inby the last open crosscut shall be ~~qualified by the Chief in the operation of the device, or certified by the Board of Coal Mining Examiners to conduct gas testing.~~ Methane detectors or indicators shall be maintained in permissible condition.

C. Methane detectors or indicators shall be calibrated at least monthly in accordance with manufacturers recommendations. *A record of such calibration shall be made in a book for this purpose kept at a surface location at the mine and maintained for one year.*

§ 45.1-161.235. Rock dusting.

A. All underground areas of a mine, except those areas where the coal dust is too wet or too high in incombustible content to propagate an explosion, shall be rock dusted to within forty feet of all ~~active workings working faces~~, unless such areas are inaccessible or unsafe to enter or unless the Chief, or his authorized representative, permits an exception upon his finding that such exception will not pose a hazard to the miners. All crosscuts that are less than forty feet from ~~active workings working faces~~ shall also be rock dusted.

B. All other areas of a mine shall be rock dusted if conditions are found to be so dusty as to constitute a hazard after proper inspection. Should such conditions be found to exist, the Chief, or his authorized representative, shall require the necessary rock dusting to make the areas of the mine safe.

C. Coal dust, including float coal dust deposited on rock-dusted surfaces, loose coal, and other combustible materials shall be cleaned up and not be permitted to accumulate excessively in active workings, or on electric equipment therein.

§ 45.1-161.249. Duties of mine foreman.

A. The mine foreman shall see that the requirements of this Act that pertain to his duties and to the health and safety of the miners are fully complied with at all times. ~~Where it is necessary that the mine foreman be temporarily absent from the mine, he shall have permission from the Chief to use a competent person.~~

B. The mine foreman shall see that every miner employed to work in such mine before beginning work therein, is aware of all hazardous conditions incident to his work in such mine. The mine foreman shall also see that every miner employed in such mine shall be furnished with copies of this Act and the printed rules pertaining to such mine. Any imminent danger that cannot be removed within a reasonable time shall be reported to the Chief by the quickest available means.

§ 45.1-161.251. Employment of inexperienced underground miners.

A. Inexperienced underground miners shall be required to work with an experienced underground miner for a total of at least six months following underground employment. However, experienced surface miners shall only be required to work with an experienced underground miner for a total of at least sixty days following underground employment.

B. No inexperienced underground miner shall be assigned, or allowed, or be required to perform work alone in any area where hazardous conditions exist that would *there is the potential to* endanger his safety unless he can communicate with others, can be heard, or can be seen.

§ 45.1-161.256. Safety examinations.

A. On-shift examinations of the work area including pit, auger, thin seam and highwall operations shall be conducted by certified persons once every production shift and at such other times or frequency as the Chief designates necessary for hazardous conditions.

B. On-shift examinations of all mobile equipment shall be conducted by an authorized ~~or~~ a competent person.

C. Pre-shift examinations shall be conducted by a certified person for certain hazardous conditions designated by the Chief.

D. ~~Silt retaining dams and~~ Mine refuse piles shall be examined daily by an authorized person *on any day on which a person works at such location.*

E. The location of all natural gas pipelines on permitted surface mine areas shall be identified and conspicuously marked. Pre-shift examinations shall be conducted of the location of pipelines whenever active workings are approaching within 500 feet unless otherwise approved by the Chief.

F. Air quality examinations shall be conducted by a certified person when a surface coal mining operation intersects an underground mine, auger hole or other underground workings.

G. Examinations for methane shall be conducted in surface installations, enclosures or other facilities in which coal is handled or stored once each production shift. Such areas shall also be tested for methane before any activity involving welding, cutting or an open flame. Examinations pursuant to this subsection shall be made by a ~~competent~~ *an authorized person certified to make gas tests.*

H. Electrical equipment and wiring shall be inspected as often as necessary but at least once a month.

I. Fire extinguishers shall be examined at least once every six months.

J. Areas of inactive surface coal mines shall be examined for hazardous conditions by a mine foreman immediately before miners are permitted to enter into such areas to take emergency actions to preserve a mine.

§ 45.1-161.257. Records of examinations.

A. Documentation of examinations and testing conducted pursuant to § 45.1-161.256 shall be recorded in a mine record book ~~by the certified person performing the examination provided for that purpose.~~ Documentation shall include hazardous conditions found in the work area. However, examinations of fire extinguishers shall be conducted by an authorized person and documentation shall be accomplished by recording the date of the examination on a permanent tag attached to the extinguisher.

B. The actual methane readings taken during ~~on-shift~~ examinations *required under this Act* shall be recorded in the mine record book. ~~If the methane level detected is less than one tenth of one percent, the entry shall state "less than 0.1 percent detected."~~

C. The surface foreman shall maintain and sign a daily record book. *Where such reports disclose hazardous conditions, the surface foreman shall take prompt action to have such conditions corrected, barricaded or posted with warning signs.* The reports entered into the book shall be read and ~~signed~~ *countersigned* by the operator, or his agent. *When one individual serves in more than one position that is required to countersign such reports, he shall only be required to sign each report once.* All records of inspections shall be open for inspection by interested persons and maintained at the mine site for a minimum of one year.

§ 45.1-161.258. Areas with safety or health hazards.

A. ~~The following shall be reported by the operator, or his agent, immediately to the Chief or his designated representative:~~

- ~~1. Imminent danger conditions which cannot be removed within reasonable time.~~
- ~~2. Accidents involving serious personal injury or death.~~
- ~~3. Serious fires.~~
- ~~4. Unplanned explosions.~~
- ~~5. The unintentional fall of highwall that affects equipment or personnel.~~

B. ~~Areas containing safety or health hazards that are not immediately obvious to personnel Any hazardous condition shall be corrected promptly or the affected area shall be barricaded or posted with warning signs specifying the hazard and proper safety procedures. Any imminent danger that cannot be removed within a reasonable time shall be reported to the Chief by the quickest available means.~~

§ 45.1-161.263. First aid training.

A. Surface foremen shall have completed and passed a first aid course of study as ~~proscribed~~ *prescribed* by the Chief. The Chief is authorized to utilize the Department's educational and training

facilities in the conduct of such training programs and may require the cooperation of mine operators in making such programs available to their employees.

B. Each operator of a surface coal mine, upon request, shall make available to every miner employed in such mine first aid training, including refresher training.

§ 45.1-161.266. Duties in case of fire.

A. Should a fire occur, the person discovering it and any person in the vicinity of the fire shall make a prompt effort to extinguish it. When a fire that may endanger persons at the mine cannot be extinguished immediately, all persons shall be withdrawn promptly from the area of the fire.

B. ~~Immediately upon knowledge of serious~~ *In case of any unplanned* fire at or about a mine *not extinguished within thirty minutes of discovery*, the operator or agent shall report by the quickest available means to the Chief, giving all information known to him regarding the fire. The Chief shall take prompt action, based on the information, to go in person or dispatch qualified subordinates to the scene of the fire for consultation, and assist in the extinguishing of the fire and the protection of exposed persons. In the event of a difference of opinion as to measures required, the decision of the Chief or his designated subordinate shall be final, but must be given to the operator in writing to have the force of an order.

§ 45.1-161.269. Equipment operation.

A. Equipment operating speeds, conditions and characteristics shall be prudent and consistent with conditions of roadway, grades, clearance, visibility, traffic, type and use of equipment.

B. Vehicles shall follow at a safe distance; passing shall be limited to areas of adequate clearance and visibility.

C. Mobile equipment shall be operated under power control at all times and mobile equipment operators shall have full control of the equipment while in motion.

D. Before starting or moving equipment, an equipment operator must be certain by signal or other means that all persons are clear.

§ 45.1-161.270. Safety measures on equipment.

A. Rubber tired or crawler mounted equipment shall have rollover protective structures to the extent required by 30 CFR 77.403a.

B. Seat belts shall be maintained in all mobile equipment that are required to have rollover protective structures under subsection A. Operators of such equipment shall wear seat belts when the equipment is in motion.

C. Mobile equipment shall be equipped with adequate brakes and parking brakes.

D. Cab windows shall be of safety design, kept in good condition and clean for adequate visibility.

E. Tires shall be deflated before repairs on them are started and adequate means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation.

F. An audible warning device and headlights shall be provided on all self-propelled mobile equipment.

G. An automatic backup alarm, that is audible above surrounding noise levels, shall be provided on all mobile equipment. *An automatic reverse-activated strobe light may be substituted for an audible alarm when mobile equipment is operated at night.*

H. All equipment raised for repairs or other work shall be securely blocked prior to persons positioning themselves where the falling of such equipment could create a hazardous condition.

§ 45.1-161.280. Transformers.

A. Unless surface transformers are isolated by elevation (eight feet or more above the ground), they shall be enclosed in a transformer house or surrounded by a suitable fence at least six feet high. If the enclosure or fence is of metal, it shall be grounded effectively. The gate or door to the enclosure shall be kept locked at all times, unless authorized persons are present.

B. Surface transformers containing flammable oil and installed where they present a fire hazard shall be provided with means to drain or to confine the oil in the event of rupture of the transformer casing.

C. Suitable danger signs shall be posted conspicuously at all transformer stations on the surface.

D. All transformer stations on the surface shall be kept free of nonessential combustible materials and refuse.

E. No electrical work shall be performed on low-voltage, medium-voltage, or high-voltage distribution circuits or equipment, except by a certified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a certified person. Disconnecting devices shall be locked out and suitably tagged by the persons who perform ~~such electrical or mechanical work on such circuits or equipment connected to the circuits~~, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such persons. Locks and tags shall be removed only by the persons who installed them or, if such persons are unavailable, by certified persons authorized by the operator or his agent. However, employees may, where necessary, repair energized trolley wires if they wear insulated shoes and lineman's gloves. This ~~section does not prohibit qualified repairmen from having power on equipment for making checks on such equipment~~ *certified electrical repairmen from making checks on or troubleshooting energized circuits or the performance of repairs or maintenance on equipment by authorized persons once the*

power is off and the equipment is blocked against motion, except where motion is necessary to make adjustments.

§ 45.1-161.282. Circuit breakers and switches.

A. Automatic circuit breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and power circuits against excessive overload. Wires or other conducting materials shall not be used as a substitute for properly designed fuses, and circuit breaking devices shall be maintained in good safe operating condition.

B. Operating controls, such as switches, starters, and switch buttons, shall be so installed that they are readily accessible and can be operated without danger of contact with moving or live parts.

C. Electric equipment and circuits shall be provided with switches or other controls of safe design, construction and installation.

D. ~~Dry wooden platforms,~~ Insulating mats, or other electrically nonconductive material shall be kept in place at each ~~switchboard,~~ power-control switch, and at stationary machinery where shock hazards exist.

E. Resistors or rheostats shall be installed in such a manner as not to create a fire hazard, and shall be guarded adequately against personal contact.

F. When not in use, power circuits shall be de-energized on idle days and idle shifts or protected against short circuits in accordance with the load on such circuits.

G. Electric parts, such as switches, circuit breakers, rheostats, relays and fuses, shall be installed on switchboards or mounted on incombustible bases of slate or equivalent insulating material.

H. Switchboards shall be located so that ample room will be provided between the switchboard and passageways or lanes of travel and shall have an entrance at each end to permit authorized persons to inspect, adjust, or repair apparatus back of the board. Switchboards shall have the entrance to the rear guarded against entrance of unauthorized persons, unless in a building that is kept locked.

I. Switchboards shall be well lighted for switch operations in the front and for repair and maintenance in the rear.

J. Rooms housing switchboards shall not be used for the storage of combustible materials, and shall be kept free of debris and refuse.

~~K. E.~~ Suitable danger signs shall be posted conspicuously at all ~~high-potential switchboard high-voltage~~ installations.

~~L. F.~~ All power wires and cables shall have adequate current-carrying capacity, shall be guarded from mechanical injury and installed in a permanent manner.

~~M. G.~~ Power circuits shall be labeled to indicate the unit or circuit they control.

~~N. H.~~ Persons shall stay clear of an electrically powered shovel or other similar heavy equipment during an electrical storm.

§ 45.1-161.285. Misfires.

A. ~~Where misfires occur with electric detonators,~~ *Misfires shall be reported promptly to the mine foreman and no other work shall be performed in the blasting area until the hazard has been corrected.* A waiting period of at least fifteen minutes shall elapse before anyone returns to the ~~shot area~~ *misfired holes. If explosives are suspected of burning in a hole, all persons affected shall move to a safe location for the longer of one hour or until the danger has passed.* ~~After~~ When such failure involves electronic detonators, the blasting cable shall be disconnected from the source of power and the battery ends short-circuited before electric connections are examined.

B. Explosives shall be removed by firing a separate charge at least two feet away from, and parallel to, the misfired charge or by washing the stemming and the charge from the borehole with water, or by inserting and firing a new primer after the stemming has been washed out.

C. A very careful search of the blasting area, and if necessary, of the coal after it reaches the tippel shall be made after blasting a misfired hole to recover any undetonated explosive.

D. The handling of a misfired shot shall be under the direct supervision of the foreman or an authorized person designated by him.

§ 45.1-161.290. Auger hole penetration of underground mines; testing.

A. A qualified person shall, using approved devices, test for methane and deficiency of oxygen when an auger hole penetrates ~~an abandoned or mined out~~ *a worked-out* area of an underground mine.

B. Internal combustion engines shall not be operated in the vicinity of an auger hole where tests for methane and oxygen deficiency are being conducted.

C. If methane is detected or a deficiency of oxygen is found to exist no further work shall be performed until the atmosphere has been made safe.

§ 45.1-222. Dams and refuse piles to be constructed, approved, etc., by qualified engineer; designs and other data to be submitted to the Chief.

(a) A. On and after July 1, 1974, new water or silt retaining dams, or a *dams at mine refuse pile piles impounding water*, or the modification of existing mine water or silt or mine refuse retaining dams shall be designed and constructed by, or under the direction of, a qualified engineer, if such retaining dam:

(1) *I.* Is designed to impound water or silt to a height of five feet or more above the lowest natural

ground level within the impounded area; and

- (2) 2. Has a storage volume of fifty acre-feet or more; or
- (3) 3. Is designed to impound water or silt to a height of twenty feet or more, regardless of storage volume.

(b) B. Water or silt retaining dams or a mine refuse pile in existence prior to July 1, 1974, which impound the volume of water or silt specified in subsection (a) A of this section, shall, within 120 days from July 1, 1974, be approved as structurally safe for the volume of water or silt impounded therein by a qualified engineer. The operator shall, in accordance with the requirements of subsection (a) A of this section, make any construction modifications necessary to obtain such approval.

(c) C. Water and silt retaining dam or mine refuse piles, designs, construction specifications, and other related data, including final abandonment plans, shall be approved and certified by the qualified engineer specified in subsection (a) A of this section, and by the operator or his agent.

(d) D. The designs, construction specifications, and other related data approved and certified in accordance with subsection (c) C of this section shall be submitted for approval to the Chief. If the submittal is approved by the Chief, he shall notify the operator in writing. If he disapproves, he shall notify the operator with his written objections thereto and his required amendments. But in no event shall the Chief fail to approve or disapprove the submittal within thirty days following the receipt thereof.

§ 45.1-224. Examination of dams and refuse piles; potentially hazardous conditions; plans to be submitted by operators.

(a) A. All water and silt retaining dams or mine refuse piles shall be examined ~~daily~~ *weekly* for visible structural weakness, volume overload and other hazards by a qualified person designated by the operator. When rising water and silt reaches eighty percent by volume of the safe design capacity of the dam, such examination shall be made more often as required by the Chief ~~Mine Inspector~~ or his designated agent. ~~Frequent examinations must be made during periods of rainfall that could create flooding conditions.~~

(b) B. When a potentially hazardous condition exists, the operator shall initiate procedures to:

(1) 1. Remove all persons from the area which may reasonably be expected to be affected by the potentially hazardous condition;

(2) 2. Eliminate the potentially hazardous condition; and

(3) 3. Notify the Chief ~~Mine Inspector~~ or the District ~~Mine Inspector~~ in whose area the retaining dam is located *by the quickest available means.*

(c) C. Records of the inspections required by subsection (a) A of this section shall be kept and certified by the operator or his agent. Such records shall be kept on the surface at the office or designated station of the mine.

(d) D. The operator of each coal mine on which a water and silt retaining dam is located shall adopt a plan for carrying out the requirements of subsections (a) A and (b) B of this section. The plan shall be submitted for approval to the Chief ~~Mine Inspector~~ on or before October 31, 1974. The plan shall include:

(1) 1. A schedule and procedures for inspection of the retaining dam by a qualified person *under normal conditions and under conditions that could cause flooding;*

(2) 2. Procedures for evaluating potentially hazardous conditions;

(3) 3. Procedures for removing all persons from the area which may reasonably be expected to be affected by the potentially hazardous conditions;

(4) 4. Procedures for eliminating the potentially hazardous conditions;

(5) 5. Procedures for notifying the Chief ~~Mine Inspector~~; and

(6) 6. Any additional information which may be required by the Chief ~~Mine Inspector~~.

(e) E. Before making any changes or modifications in the plan approved in accordance with subsection (d) D of this section, the operator shall obtain approval of such changes or modifications from the Chief ~~Mine Inspector~~, ~~Commonwealth of Virginia.~~

2. That §§ 45.1-161.185, 45.1-161.192 and 45.1-161.230 of the Code of Virginia are repealed.